

1997

## A comparative analysis of school-based performance of mobile and nonmobile students

Yvonne Darcel Smith-Jones

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**A COMPARATIVE ANALYSIS OF SCHOOL-BASED  
PERFORMANCE OF MOBILE  
AND NONMOBILE STUDENTS**

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**A Dissertation**

**Presented to**

**The Faculty of the School of Education**

**The College of William and Mary in Virginia**

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**In Partial Fulfillment**

**of the Requirements for the Degree**

**Doctor of Education**

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**by**

**Yvonne D. Smith-Jones**

**December 19, 1997**

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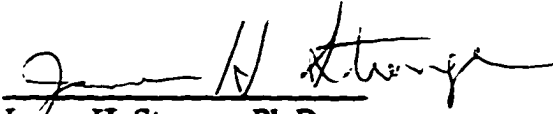
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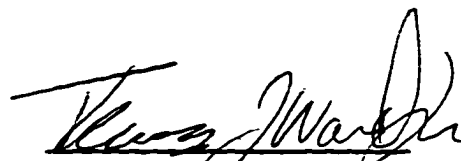
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**James H. Stronge, Ph.D.**  
Chair of Doctoral Committee



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**Robert J. Hanny, Ph.D.**



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**Thomas J. Ward, Jr., Ph.D.**

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# **A COMPARATIVE ANALYSIS OF SCHOOL-BASED PERFORMANCE OF MOBILE AND NONMOBILE STUDENTS**

## **Abstract**

The primary purpose of this study was to determine the impact of mobility on fifth grade students in an urban elementary school environment during the 1994-95 and 1995-96 school years. The significance of this study lay in its intent to assess the impact of mobility. Specifically, the study analyzed the demographic characteristics of mobile students and investigated the impact of mobility on academic achievement, attendance, discipline referrals and retention. The sample consisted of 244 fifth graders. Archival data were obtained from the students' scholastic and directory information records for the 1994-95 and 1995-96 school years. The results were analyzed by performing a one tail directional t-test. The study concluded that reading achievement and mathematics achievement of mobile students were significantly less than that of nonmobile students. In addition, the number of absences, discipline referrals, and retentions for mobile students were significantly greater than that of nonmobile students. This study supported the idea that schools must advocate more and better interventions to equitably meet the needs of mobile students. Recommendations were made for future research.

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**A COMPARATIVE ANALYSIS OF SCHOOL-BASED  
PERFORMANCE OF MOBILE  
AND NONMOBILE STUDENTS**

## **Chapter 1: The Problem**

### **Introduction**

**The United States is a highly transient society in which mobility is a way of life for many Americans. Initially, this country was built on a foundation of movement as a means of social advancement and prosperity. However, relocation and mobility have developed new definitions for some segments of the population. Today, relocation occurs frequently within poor, minority families (Wood, Halfon, Scarlata, Newacheck & Nessim, 1993). The U.S. Bureau of the Census (1990) revealed that poor families tend to move 50% to 100% more often than families that are not poor. This segment of the population did not move for the enhancement of living conditions. Many poor families moved for economic reasons (New York State Education Department, 1992; Schuler, 1990; Wood et al., 1993).**

**Annually in the United States, one out of every five families with school-age children relocate residence which results in children transferring to new schools (United States Bureau of the Census, 1990). Bayer (1982) was one of the first educational researchers to focus on the mobility of urban students as an important factor to study in terms of student achievement. In urban elementary**

**schools, as many as 50% of the students change schools during a given academic year (Lash & Kirkpatrick, 1990). Subsequently, the academic and social adjustments inherent in transferring from school to school may place undue hardship on some urban school students.**

**School transfers are considered one of the most stressful and frequently occurring major life events (Coddington, 1972). In the face of mounting student mobility, educators are being confronted with the responsibility of making school transitions a more positive experience for students and their families. Therefore, classroom teachers must accommodate the incoming students to ensure their continued academic progress and acceptance into the new class. Efforts to provide a smooth school transition are often thwarted by the lack of advance notice of incoming students and immediate access to the previous school records. These situational realities place the teacher at a disadvantage in welcoming mobile students into the new learning environment. Furthermore, Newman (1988) suggested that some teachers may prejudge students who enter their classrooms after the beginning of the school year. Absence of student records may cause concern for the teacher in prescribing the appropriate instruction. Lash and Kirkpatrick (1994) noted that transfer students are at-risk for developing incomplete or inaccurate understanding of instructional content due to differences in pedagogical approaches and placement in more or less advanced curricula.**

Therefore, as part of the student-teacher relationship, it is essential that teachers recognize and respond to the unique needs of urban mobile students.

Good and Brophy (1986) identified four types of relationships students have with teachers: attachment, concern, indifference, and rejection. These researchers found that teacher attitudes correlate with differential teacher behavior toward students. Ideally, teachers would form an attached relationship with urban mobile students who desperately need to feel wanted and loved by the teacher. In reality, a relationship of concern is more likely to develop, whereby the teacher focuses mainly on student achievement and socialization into the classroom. This perception is supported by Lash and Kirkpatrick (1994) in four identified factors of teacher beliefs concerning transfer students: (a) high turn-over rate causing interruptions in instruction; (b) disruptive behavior affecting class learning and loss of instructional time; (c) adapted curriculum to compensate for inadequate learning skills and; (d) changed student population. More emphasis should be placed on the development of an attachment relationship with urban mobile students.

At the present time most schools do not have systems designed to address the problems of urban student mobility (Bayer, 1982; Lash & Kirkpatrick, 1990). Despite the continuous interest in urban mobility over the past years, and the present renewed concern, little research examines the effects of mobility upon

student achievement (Hefner, 1994; New York State Education Department, 1992; Summers-Heck, 1992). The research on student mobility is meager, which supports the need for additional research to better understand the dimensions of student mobility. A causal-comparative design will be used to examine the impact of student mobility on student achievement, attendance, discipline referrals, and retention.

#### **Statement of the Problem**

The purpose of this study was to determine the impact of mobility on fifth grade students in an urban elementary school environment during the 1994-95 and 1995-96 school years. Specifically, the study analyzed the demographic characteristics of mobile students and investigated the impact of mobility on academic achievement, attendance, discipline referrals and retention.

#### **Theoretical Rationale**

Although the report has been debated thoroughly since being published 30 years ago, Coleman (1966) found that the most important variables in or out of school to be the educational and social class background of the child's family. Hirsch (1988) agreed with the Coleman study, which inferred that under the present curricula arrangements, academic achievement is heavily determined by family background. Page and Keith (1981) developed a path model to explain the relationship between student achievement and the selected variables of race, family



background, general ability, and private school. The results indicated a strong causal relationship between the four variables and achievement. For the purposes of this study, only the variables of family background and general ability were most relevant. Coleman, Hoffer and Kilgore (1981), and Page and Keith (1981) found a strong relationship between family background and school achievement. The path model identified general ability to be even more highly correlated with achievement than family background (Page & Keith, 1981). However, while the general ability variable is important, it cannot be considered the overarching variable in determining student achievement. The ecological perspective used in this study views general ability as a transmitter of family background measures (Page & Keith, 1981). This perspective provides a critical rationale, which supports school restructuring specific to mobile students.

### Research Hypotheses

This study attempted to provide responses for the following research hypotheses:

1. The mathematics achievement of mobile students is significantly less ( $p < .05$ ) than that of nonmobile students.
2. The reading achievement of mobile students is significantly less ( $p < .05$ ) than that of nonmobile students.

3. The school attendance of mobile students is significantly less ( $p < .05$ ) than that of nonmobile students.

4. The number of discipline referrals of nonmobile students are significantly less ( $p < .05$ ) than that of mobile students.

5. The grade retention of nonmobile students is significantly less ( $p < .05$ ) than that of mobile students.

#### **Operational Definitions**

For the purpose of this study, the following definitions applied:

**Attendance:** A record of total days a student was present in class during the 1994-95 and 1995-96 school years.

**Discipline Referral:** Administrative action taken by a teacher or administrator to initiate disciplinary action against a student for a behavioral infraction.

**Downward Mobility:** The movement by an individual or group to a lower socioeconomic level (Cohen, 1994).

**Mathematical Achievement:** A measurement of student performance as indicated by the mathematical subtest of the Iowa Test of Basic Skills for the 1994-95 and 1995-96 school years.

**Mobile Students:** Students in grade five for the 1994-95 and 1995-96 school years who have two or more school transfers before enrollment in this

urban elementary school (Ligon & Paredes, 1993; United States General Accounting Office, 1994).

**Nonmobile Students:** Students in grade five for the 1994-95 and 1995-96 school years who have remained in this urban elementary school since initial enrollment in kindergarten or students with fewer than two transfers from other schools (Ligon & Paredes, 1993; United States General Accounting Office, 1994).

**Reading Achievement:** A measurement of student performance as indicated by the reading comprehension subtest of the Iowa Test of Basic Skills for the 1994-95 and 1995-96 school years.

**Upward Mobility:** The movement by an individual or group to a higher socioeconomic level (Cohen, 1994).

**Retention:** A record of the total number of times students have repeated a grade.

### **Significance of the Study**

The significance of this study lay in its intent to assess the impact of mobility on student achievement through an examination of attendance, discipline referrals, and retention. Although there has been a substantial amount of literature on mobility and academic success for migrant students and, more recently, for homeless students, there was a dearth of information on mobile urban students.

Hefner (1994) noted that most of the studies conducted in the 1950s and 1960s dealt with financially able, healthy white families. Such studies reflected upward mobility for the children in these families as well (Evans, 1966; Gilliland, 1958; Levine, 1966; Perrodin & Snipes, 1966; Sackett, 1954). However, a more recent study indicated that in the 1970s and 1980s relocation of poor, minority families reflected downward mobility (Wood et al., 1993). The negative impact of mobility on disadvantaged children was revealed by a decline in academic achievement (Abramson, 1974; Black & Bargar, 1975; Ingersoll, Eckerling, & Scamman, 1988; Schaller, 1976; Whalen & Fried, 1973). These studies suggested that relocation is detrimental to poor and minority families. Unquestionably, children of poor families have represented the largest single group which traditionally has been identified as being at-risk for academic and social failure (Davis, 1995). The need to provide a more stable educational environment for these students is essential. In order to intervene on behalf of these children, research must first explore thoroughly the variables most related to family influence -- attendance, discipline and retention.

This study determined the impact of mobility on elementary students. Included in this study was data on mobile and nonmobile student populations located in one inner city school. Data regarding attendance, discipline, and retention were examined on these elementary student populations. Data gathered

in this study may assist educators in planning for school improvement in order to better meet the academic, social, and emotional needs of mobile students in school.

#### **Limitations of the Study**

This case study examined only fifth graders during the 1994-95 and 1995-96 school years at one of the elementary schools located in central Virginia. The study excluded migrant, military students, as well as special education students housed in this school.

#### **Major Assumptions**

The first major assumption of this study was that the Iowa Test of Basic Skills serves as an adequate measure of student achievement. The second major assumption was that teachers and administrators had accurately recorded discipline referrals and attendance records. The third major assumption was that most mobile students in this study were from families experiencing the effects of low socioeconomic status.

## **Chapter 2: Review of Literature**

### **Introduction**

**Present day societal problems have resulted in an ever-increasing number of children labeled at-risk for school failure. Hodgkinson (1992) estimated that at least 40% of the current school-age population in 1992 could be considered at-risk of educational failure because of such contributing factors as poverty, physical and emotional handicaps, lack of health care, difficult family conditions, constant movement, and violent neighborhoods. Davis and McCaul (1990) included mobility as another at-risk factor that may increase the frequency of absences, delay the acquisition of basic skills, and create inappropriate interactions among urban student populations. Cohen (1994) defined downward mobility as movement by an individual or group to a lower socioeconomic level. Research revealed several at-risk characteristics of downwardly mobile students (Druin, 1986; Newman, 1988; New York State Education Department, 1992). Some economic and environmental factors have related to downward mobility. In some families these at-risk characteristics emerged. Therefore, some mobile students are**

apart of the downward mobility population. This review of the literature examined mobility with respect to disadvantaged urban students.

### Ecological Model and Family Mobility

This study used the school ecological model to demonstrate the relationships, interactions, and interdependencies among children and their families in relation to school accountability of student achievement (Kelly, 1968). The model was primarily used in the area of community psychology. This model examined three ecological principles: adaptation, interdependence, and cycling resources. These same principles applied to mobile students and their families in the adjustment to new environments (Jason, Betts, Johnson, Weine, Newson, Filippelli, & Lardon, 1992). It was crucial that the needs of mobile students be identified early to minimize disruptions to academic and social performance. The research, however, suggested that schools can make a difference, especially in the lives of at-risk, poor, and minority students (Comer, 1988; Goodlad, 1984; Slavin, 1991). The rationale for this study was premised on the belief that school personnel should serve as change agents in advancing student achievement.

Mobile families engaged in a process of constant change which required adaptation to different surroundings. According to Kelly (1966) the ecological

theory described behaviors as the interaction of human beings with the physical, social, and psychological environments and viewed these behaviors as adaptive. Wilkinson and O'Connor (1982) revealed that the role of adaptation should extend to the maintenance and modification of the environment. The principle of adaptation in this ecological model provided a clearer understanding of the variables related to behaviors and achievement (Kelly, 1968).

The principles of interdependence and cycling resources formed relationships to foster clear communication. The principle of interdependence was reflective in the interrelationships of students and parents. Kelly (1968) noted that interdependence assisted in understanding changes in an interrelated system. For example, when parents became actively involved with the school, the likelihood of student achievement increased. The mobile students must have experienced change and adapted to different learning environments. The interdependence principle addressed change in all parts of the system. A need to involve untapped community resources occurred when problems associated with student and family mobility have been identified. Youth offices, social services and housing departments, mental and public health, and other agencies instrumental in developing the total child must assist in a collaborative manner. It is essential that support agencies coordinate resources to assist mobile families.



Bronfenbrenner (1979) suggested that society needs to understand the connections between family functioning and the adaptation of children to school which described four levels of analyses. The four levels were: (a) microsystem-family interaction processes having a direct effect on the child; (b) mesosystem-external environments impacting the multiple social system of which the child is a member; (c) exosystem-societal arrangements affecting family life directly and indirectly; and (d) systematic-change naturally occurring over the course of life.

In recent decades there has been a major movement in the social sciences to conceptualize and analyze the problems of individuals contextually rather than in isolation (Vickers, 1994). This ecological model allowed the mobile student to be viewed within a contextual framework. Such a model may have assisted in understanding the critical interactions between mobile students and environments. Some educational researchers remained largely unaware and others were not supportive of this inclusive view which characterized the ecological perspective (Vickers, 1994). In addition, the ecosystemic approach cited by Bronfenbrenner (1979) and the ecological model described by Kelly (1968) both required the inclusion of family, school, and social environment factors. This study utilized the major principles of the Kelly (1968) and Bronfenbrenner (1979) models as a lens to examine the impact of mobility on student achievement.

### **Economics and Family Mobility**

During the climax of the nineteenth century opportunity for movement increased due to the rapid expansions of transportation systems, especially the railroads. Upward mobility became a major factor during the period of 1850-1940. The shift from an agricultural to an industrial society was reflected in voluntary and involuntary movement within the population. As society became more technical, a similar pattern of movement occurred, resulting in the downsizing and closing of many factories. Loss of employment resulted in downward mobility for many families. Downward mobility negatively affected American society because of a loss of economic resources, self worth, occupational status, and income (Eitzen, 1992).

This downward mobility had significant implications for the family. The main implication involved the reasons for movement within families. Relocation became a viable alternative for many families. The reasons for this type of mobility varied with families. Holland, Kaplan and Davis (1974) noted that when families moved due to financial problems, they were likely to encounter a difficult adjustment period. Moreover, McAllister, Kaiser and Butler (1971) found that black families moved most frequently because they were forced out of their homes and least frequently because of job transfers or a need for more living space. Williams, Jobes, and Gilchrist (1986) concluded that female heads of households

relocated for quality of life considerations while male heads of households relocated for job considerations. Consequently, the reasons for a family move might have affected the student and determined the quality of life for that student.

The income of the family determined the economic status and social class of children (Eitzen, 1992). Parental employment status and earnings were among the interrelated factors which explained why six million young children are poor (National Center For Children In Poverty, 1995). In the United States, the National Center for Children in Poverty (1995) revealed the following statistical data related to families, children and poverty:

The poverty rate among children under six living with single mothers was almost five times greater to be poor than children who were living with married parents. Eighty-eight percent of children under six whose parents received public assistance and have no earnings from unemployment were poor. Forty-eight percent of students under six who lived with a working parent were poor. Twenty percent of children in the age range from 6-17 were poor and lived in poverty. (p. 134) Interestingly, the same at-risk indicators were found for both mobile and at-risk students. The National School Board Association (1989) published "An Equal Chance: Education At-Risk Children to Succeed" and offered a broad definition for at-risk as follows:

**At-risk students are subject to environmental, family, or societal forces over which they have no control and adversely affect their ability to learn in school and survive in society. As a result, at-risk students have uncertain futures as students, workers, and citizens, and ultimately are unlikely to become productive members of society. (p. 6)**

**Ligon & Paredes (1993) revealed income as a critical family factor in the investigation of student mobility. Families with limited financial resources moved more frequently than families in other types of financial situations (Eitzen, 1992; Holland, Kaplan, & Davis, 1974). The prospect study in the U. S. General Accounting Office (1994) reported that children from low income families were more likely to change schools more frequently than those from higher income families. Furthermore, this study noted that 30% of children living below the poverty line changed schools frequently as compared to the eight percent of children living well above the poverty line. Overall, the percentage of children who changed schools frequently decreased as family income increased.**

#### **Environmental and Family Mobility**

**Population migration has become a well established feature of a highly technical society. There continues to be a constant movement among rural, urban, and suburban families. Mobility has existed in every social class for various reasons. In middle class families, mobility was often related to promotion, divorce,**

or the inability to meet financial obligations (Cohen, 1994). The National Center for the Children in Poverty (1995) cited "the poverty rates for children under six as 35% in urban areas, 19% in suburban areas, and 28% in rural areas. These statistics indicated that the majority of poor families resided in the inner cities" (p. 9). Nearly one out of every six children lived in overcrowded housing in 1991 (Annie E. Casey Foundation, 1994). Overcrowding was only one of several environmental factors which place children at-risk. Other factors which related to deteriorating or distressed neighborhoods included: poverty, female headed households, high school dropouts, unemployment, and welfare reliance (Annie E. Casey Foundation, 1994). This was evidenced by the numbers of poor families living in cities which were neglected and infested with crime. Families that were categorized as poor tended to move 50% to 100% more frequently than families that were not poor (United States Bureau of the Census, 1989). Schuler (1990) reported that 58% of welfare families in urban areas moved at least once a year.

Knapp and Shields (1991) described students living in poverty as disadvantaged because these students went to school poorly prepared for academic achievement. Problems arose when the value system espoused by the school system conflicted with families of students living in poverty. Research identified poverty as a strong at-risk indicator even without the mobility factor. Jason, Filippelli, Danner and Bennett (1990) identified high-risk transfer students and

concluded that they were more at-risk than other problem students within the schools. Vickers (1994) studied a group of elementary students to determine if the families of at-risk students differed from the families of non at-risk students based on demographic and interaction patterns. The findings indicated that at-risk families were both less cohesive and adaptable in most new environments.

The value systems and environmental factors of families influenced decisions about school, studying, gangs, drugs, and teenage pregnancy. However, poor choices made by at-risk students in poverty often imperiled their life chances. Moreover, neighborhood conditions often determined the degree of personal safety, the quality of education, the opportunity for positive recreation, and the availability of jobs that a child experienced as a part of growing up (Annie E. Casey Foundation, 1994). The challenge for families living in inner-cities was to earn an adequate income in order to provide an environment which enhanced the quality of family life.

Despite the numerous difficulties facing American families, the family remained the central institution in students' lives. Students living in poverty frequently contended with financial hardships, uneducated parents, poor supervision, and erratic discipline. Therefore, the prospect of students flourishing in families with multiple risk factors was minimal. Cohen and Tyree (1986) suggested that educational attainment, however, may serve as the bridge to

upward mobility for students in poverty. Unfortunately, the existence of poverty promoted educational disparity which continued as a formidable challenge to educators. The focus must be to ensure that the mobile student received educational opportunities comparable to those of the nonmobile students.

### **School and the Mobile Student Issues**

Student mobility referred to the frequency with which students change schools. A longitudinal study by the United States General Accounting Office (1994) defined student mobility in terms of third graders who had attended three or more schools since first grade. Ligon and Paredes' (1993) study of the Austin Public Schools classified a mobile student as having made one or more moves in the previous and current years. In the typical Chicago elementary school, only 50% of the students were still enrolled at the school after a three year period (Kerbow, 1996). Other researchers focused on the constant movement of students. Ascher and Schwartz (1987) noted that students who moved frequently may erroneously be counted as dropouts due to difficulties inherent in the transmittal of students records. The Cleveland Public Schools (1989) defined mobile students as those who have transferred to another school at least once. Furthermore, Jason et al. (1992) differentiated school transitions as scheduled and unscheduled. A scheduled transition was planned by the family or school, and the move occurred at the beginning of an enrollment period. On the other hand, an

unscheduled transition was unplanned and may have occurred at any time during the school year (Ingersoll et al., 1989; Jason et al., 1992).

Frequent transfers between schools was one indicator of an at-risk student (Davis & McCaul, 1990). Other indicators included: poor school attendance, consistently low scores on standardized achievement tests, disruptive behavior, and retention in one or more grades. In addition, at-risk indicators reflected family conditions such as low socioeconomic status, single-parent families, dysfunctional situations and values incongruent with those of the school (Levin, 1988; Slavin & Madden, 1989). Therefore, this study of student mobility recognized these at-risk indicators while focusing on the school factors essential to student achievement: attendance, discipline, referrals, and retention.

Upward and downward mobility. The research revealed studies related to upward and downward mobility with numerous studies documenting the effects of upward mobility on students. These studies aligned with the economy for each decade. Early studies focused on upwardly mobile families. As early as the 1930s, mobility of school-aged students became an important issue (Sackett, 1954). The Great Depression caused even more movement within society. Families in both rural and urban areas moved in search of a better future.

Sackett (1954), an early researcher of nonmobile and mobile students, showed that mobile students may attain higher reading scores than nonmobile



students. A common belief prevailed that mobility exposed students to a larger segment of the society and thereby enlarged their general knowledge base.

Gilliland (1958) ascertained that highly mobile students were more academically successful than less mobile students. As noted previously, Perrodin and Snipes (1966) found that mobile students had high intelligent quotients (IQ) and were from middle to upper class of society. Most family moves were due to job promotions and thus viewed as upwardly mobile (Evans, 1966; Gilliland, 1958; Levin, Wesolowski, & Corbert, 1966). Findings from this study indicated that the number of moves made by students did not appear to affect academic achievement in the areas of reading vocabulary and comprehension, arithmetic fundamentals and reasoning, mechanics of English, and spelling. Levin, Wesolowski and Corbert, (1966) suggested that while a relationship may exist between the low grades of inner-city students and their high mobility rates, the findings were not definitive. During this period of time, research indicated that the general ability of mobile and nonmobile students was comparable (Perrodin & Snipes, 1966; Sackett, 1954).

Limited research was conducted focusing on the academic progress of disadvantaged students until the 1970s. Black and Bargar (1975) examined student mobility and reading achievement. This investigation analyzed the movement history of students with respect to pattern and time. The reading achievement of mobile students did not differ significantly from that of nonmobile

students. Findings did indicate, however, that the reading achievement of mobile students may be lowered if transfers were made into highly mobile and low socioeconomic elementary schools. Abramson (1974) examined reading achievement scores of elementary mobile and nonmobile students. A comparison of fifth grade reading achievement scores indicated that nonmobile students achieved with greater success than mobile students.

Recently, Kerbow (1996) reported that schools with stable, nonmobile student populations were better prepared academically. In exploring the impact on fifth graders with regards to short-term and long-term effects of mobile students and academic growth, math scores were measured. Results revealed that mobile students were academically behind the nonmobile students following one move. However, several years following that single move, students seemed to recover to their original academic placement. On the other hand, as the number of moves increased, the academic gap widened (Kerbow, 1996). The findings suggested that mobility has a moderate relationship to student achievement.

The United States General Accounting Office study (1994) reported that of the nation's third graders who have changed schools three or more times, 41% were low achievers, that is, below grade level in reading. Meanwhile, 33% who moved two or less times and 26% of third graders who have never changed schools were on or above grade level in reading. Results were similar for math

with 33% of mobile students below grade level, compared with 17% of those who never changed schools and 41% who changed schools two times or less who were on grade level in math. Included in the United States General Accounting Office study (1994) was a prospect longitudinal study performed by the Department of Education in 1990-91. In this longitudinal study, the Department of Education surveyed 15,000 third graders nationally in 235 elementary schools, along with parents, teachers, and principals. These case studies were conducted in Maryland and California schools to validate the national findings in the United States General Accounting Office study. Information from the case studies found approximately 17% of third graders had changed schools frequently, which meant three or more schools since the beginning of first grade. Fifty-nine percent of third graders had remained in the same school since first grade. Conclusions indicated that mobile students changing schools two or more times were more likely to become low achievers in reading than nonmobile students. Much of the research presented revealed that a linkage between student mobility and student achievement. These mobility studies unequivocally offered findings as having negative or positive impact on student achievement.

Lacey and Blane (1979) cautioned researchers during this era to take into account three critical factors related to mobility: reasons for mobility, socioeconomic status, and pre- and post-test achievement scores. Although

Schaller (1976) warned against making general assumptions about mobility as being a causal contribution to achievement, other research in the 1970s suggested that mobility did impact negatively on achievement.

The 1980s and 1990s ushered in a wave of downward mobility. Many impoverished families moved to the inner cities seeking a better life. The New York State Education Department (1992) referred to these mobile families as the new urban migrants. This study revealed that highly mobile students were more educationally at-risk than their nonmobile counterparts. Compelling evidence suggested that student mobility is an at-risk indicator (Davis & McCaul, 1990). Kerbow (1996) also presented a portrait of mobile students as being at-risk. The more recent research presented the downward mobility perspective, which was quite different from upward mobility studies conducted in the 1960s and 1970s. Studies to relate the impact of downward student mobility and achievement began to emerge in the 1980s and 1990s. The studies further delineated the difference between upward and downward mobile families.

Achievement and student mobility. Educators, especially teachers, have perceived mobility as a negative influence on student achievement. As teachers monitor and assess the daily performance of students to achieve the objectives set forth by the local, state, and national boards of education, student mobility is a factor. Traditionally teachers have assigned grades to communicate and to

document student achievement in American schools (Wright & Weise, 1988). The demands of accountability to show student achievement are further increased by student mobility.

In accomplishing the goals, objectives, and standards set forth by states, teachers are confronted with the challenge to show progress to the public on some form of standardized test. John Goodlad in What Schools Are For (1994) suggested that the use of norm-referenced standardized test scores as the standard for judging student, teacher, and school performance has led to a narrow approach to accountability. Eisner (1991) noted that accountability should include an evaluation of both standardized test scores and the process used to identify the performance of educators and students. The classroom teacher views student mobility as a challenge when confronted with being accountable for student achievement. Researchers analyzed student achievement from data collected from standardized test scores and made generalizations concerning student achievement. Several studies explored the effect of student mobility on achievement (Jason et al., 1990; Ligon & Paredes, 1993; Mehana & Reynolds, 1995).

Learning to read is and continues to be the most important as well as the core of the school curriculum. Reading for some students is a complex problem. Many factors effect reading achievement. One factor identified in the following study was the continuity of the school environment on the learning process.

Abramson's (1974) objective was to ascertain if there was a difference in reading achievement between fifth grade mobile and nonmobile students. The population was fifth grade students in 10 representative community school districts in New York City. Five schools were Title I schools and the other five schools were not eligible for Title I. Fifty-one percent of the identified mobile population was eligible for Title I reading assistance. Seventy-two percent received free lunch. In this study student mobility was defined by moving two or more times in a given year. Mobile and nonmobile student groups were formed. The results were taken from the Metropolitan Reading Achievement tests which were administered to the students in grades two through six. Mobility was further determined by using the third grade class list of April, 1971 to determine which students were mobile. The underlining assumption was that constant movement from school to school omitted these fifth graders from taking the test during the third grade year. The nonmobile group in the five Title I districts was reading at a higher level than the mobile group. A grade norm of 5.7 was determined as a benchmark. The same nonmobile group was reading eight school months (-.8) below the grade norm (5.7), whereas, the mobile group was 1.5 school years (-1.5) below grade norm (5.7), a difference of several school months (.7 of a school year) in favor of the nonmobile group. These findings were practically and statistically significant. In the five non-Title I districts, the nonmobile group was reading four months (+.4)

above grade norm (5.7), whereas, the mobile group was reading seven school months (-7) below grade norm (5.7), a difference of 1.1. Excluding the fact whether or not the students were eligible or receiving Title I services, the findings indicated that 59.4% of the nonmobile group as compared to 33.8% of the mobile group was reading at or above grade norm. In conclusion, a higher percentage of nonmobile students were reading at or above the grade norm. Continuity of the school environment effected the reading achievement of these fifth grade students.

Jason et al. (1990) investigated high-risk transfer and non-transfer students and achievement in 20 inner-city Chicago elementary schools. The researchers used three criteria to identify these high-risk students: low SES background, low standardized achievement test scores, and three or more life stress factors. The data on the SES factors and life stress factors were collected from parent questionnaires. The Wide Range Achievement Test-Revised (WRAT-R) provided test scores on mathematics and reading. The transfer students had a mean score in mathematics of 85.36 verses a mean score of 89.06 for non-transfer students at the  $p < .05$  level. The transfer students had a mean score in reading of 85.08 verses a mean score of 91.27 for non-transfer students at the  $p < .05$ . The results of the data indicated that transfer students achieved at a significantly lower level than non-transfer students in mathematics and reading. The study found that mobility

negatively impacted achievement in mathematics and reading for high-risk students.

The major thrust of Ligon and Paredes' (1993) study was to create a mobility impact index which measured mobility in a way that described its relationship with learning. The research focused on refining a student mobility index based on commonalities found among several states' mobility indices. The researchers investigated a variety of formulas used to compute student mobility indices. The result was a mobility impact index. The index was used with the Austin Public Schools' 1990-1991 student database to categorize students into four groups: (a) stable over time, (b) moved during current year, (c) did not move during current year, or (d) mobile over time. Grade equivalent scores on the Iowa Test of Basic Skills or Test of Achievement and Proficiency in mathematics and reading were compared for each of the four mobility groups. The results indicated that the group that moved in the current year obtained the lowest mean adjusted grade equivalent scores in mathematics and reading of the four group comparison. However, the group that was mobile over time was the next lowest group. Researchers suggested that the difference between the two groups was nonsignificant. As expected, the group that was stable over time obtained the highest mean adjusted grade equivalent scores of the four groups in mathematics and reading. The group that did not move during the current year obtained mean



adjusted grade equivalent scores slightly below the stable group. These data suggested frequent moves and a move in the current school year negatively impacted achievement.

Ingersoll, Scamman, and Eckerling (1989) studied 60,000 multiethnic urban students in the Denver Public Schools. This study assessed the impact of geographic mobility on urban students in elementary, middle, and secondary schools during the 1987-88 school year. Mobile and nonmobile student achievement was compared on the Iowa Test of Basic Skills. Student mobility was defined by student enrollment patterns in the period from September, 1985 through March, 1987. Five student groups were identified for analyses: group (a) did not request a transfer or withdrew; group (b) made no more than one request for a transfer or withdrew no more than one time; group (c) made more than one request for a transfer or withdrew more than one time; group (d) did not make a request for transfer nor withdrew but were new-entry students during the fall of 1984; and, group (e) made one or more move transfers and withdrew but were new-entry students during the fall of 1986. The results noted that the percent of students that were classified as mobile diminished as grade level increased. Analyses of mean mathematics and reading achievement scores at each level revealed highly statistically significant differences in achievement among the five groups at the  $p < .001$ . Achievement levels of the more stable student populations

(groups a and d) were consistently higher than those of the mobile student populations (groups b, c, and e). Furthermore, the F-ratios revealed that the impact of mobility appeared to diminish as grade levels increased. The largest effect sizes were found in the early grades. However, some continued detriment was noted in grade 9 for students who made no more than one request for transfer or withdrew (group b). Interestingly, in 11 of the 12 grades, the effect of mobility was stronger in math than in reading.

The New York State Education Department (1992) study examined the impact of student mobility and school performance. For this study, the New York City Public Schools utilized the State Reference Point (SRP) and the PEP tests in elementary schools to examine math and reading, a Preliminary Competency Test (PCT) in the middle schools and the Regents Competency Tests (RCT) in the high schools. Student mobility data for all New York City Public Schools (K-12) were obtained from the New York State Education Department and Board of Education. Three types of statistical analyses were performed: (a) correlation analysis, (b) one-way analysis of variance, and (c) multiple regression analysis. The results indicated that the student mobility rate was significantly correlated with all school outcome variables, except for the RCT Writing and Regents examination in earth science. A high correlation was found between student mobility and the percent of students scoring above SRP on grade 3 PEP reading and mathematics

tests, grade 6 PEP reading test, and PCT reading test. These results suggested that high mobility rates in New York City Public Schools were significantly related to low school performance on the school outcome measures. As the mobility rate increased, the percentage of students in a school scoring above the SRP on the PEP tests and the PCTs decreased.

An examination of the group means showed that elementary and middle schools with low student mobility rates had averages of 83% to 94% of students scoring above the SRP on the PEP tests and the PCT tests. Elementary and middle schools with high mobility rates had averages of 54% to 78% of students scoring above the SPR on the same tests. High schools with low mobility rates had between 32% to 42% of the average enrollment passing the Regents examinations in mathematics. High schools with high mobility rates, on the other hand, had averages of 2% and 6% of the average enrollment passing the same examinations.

Although student mobility was found highly correlated with elementary school performance ( $r = .695$ ) when it was assessed independently, it became nonsignificant in explaining differences in elementary schools when the other independent variables were present. While student mobility alone was found to be highly correlated with middle school performance ( $r = .618$ ), it became nonsignificant in explaining differences in middle schools when the other

independent variables were present. The regression results were different for high school outcomes. Three separate regression analyses were performed using High School Performance in Regents examinations in mathematics. In the three regression analyses, student mobility was found to be the most important explanatory variable among the independent variables examined. The study confirmed that student mobility significantly differentiated student achievement at all levels. Elementary and middle schools with high mobility rates were most likely to perform below the SRP on PEP and PCT tests. High schools with less than 20% mobility rates tended to have more students passing the Regents examinations. This was a very important study because of the large sample size and the inclusion of elementary, middle, and high schools. The study clearly demonstrated the impact of mobility on student achievement.

Mehana and Reynolds (1995) studied mobility as a predictor of school achievement. The study included 988 elementary students in the Chicago Public Schools in 1992. The test data were extracted from the centralized school records. Achievement scores were obtained from two subtests: the reading and mathematics sections of the Iowa Test of Basic Skills. Multiple regression analyses were applied to the data. The results indicated that mobility predicted reading achievement when controlling for other variables such as gender, parent education, and lunch eligibility. Each additional move was associated with a

month's decline in reading achievement. Surprisingly, mobility did not predict math achievement. The effect size indicated that the students in the high mobility group had a lower score in reading than 58% of the students in the nonmobile group. High mobility did not predict that the mobile group had significantly lower scores than the nonmobile group. This study supported much of the research with respect to mobility and reading achievement. However, unlike the other studies reviewed, no correlation was found between mobility and mathematics achievement. These studies examined student achievement based on standardized test data. While teachers observed that mobile students made less progress in comparison with nonmobile students, they remained largely unaware of the magnitude or impact that mobility had on student achievement (Levin, Wesolowski, & Corbett, 1966). Therefore, teachers and researchers may have different perspectives on the achievement of mobile students. The dichotomy of these perspectives supported the need to examine the degree of mobility at each school level.

Waters (1996) examined the effects of geographic mobility on elementary school students' achievement. The sample population used in the study was 157 multiethnic fourth and fifth grade students living in a New Jersey suburban school district. The students were from low socioeconomic home environments. It was hypothesized that geographic mobility was not a determining factor in achievement

test scores in reading at the elementary school level. Test data were obtained from the Iowa Test of Basic Skills reading results during the 1995 school year. Special education and bilingual students were exempted from this study. Students were divided into four groups: group (a) consisted of students who attended the current school year since the first grade, (b) consisted of students who attended two schools after first grade, (c) consisted of students who attended three schools during their elementary experience, or (d) consisted of students who attended four to six schools. Results indicated that students in groups a and b and c and d when compared in pairs, showed nonsignificant difference in reading. On the other hand, groups b and c when compared indicated that a significant difference was noted. The conclusion revealed that frequent movement during the elementary school years impacts the reading achievement of mobile students. Meanwhile, nonmobile students with little to no movement, reading achievement was higher than the mobile students. The research hypothesis was rejected since the findings showed mobility as a factor in the difference between the reading scores. It seemed that when mobility was a factor achievement scores were lower.

Nelson, Simoni and Adelman (1996) concentrated their study on overall rates of mobility, demographic variables related to mobility and initial social ties related to mobility and initial social ties related to academic functioning and mobility. The academic functioning measure was determined by the most recent

grades for reading and mathematics. These grades were calculated to form an average overall index of academic performance. Students in the study were from 24 elementary schools in a large school division in California. Latino and African American students were the predominant racial composition. Eighty-four percent of these kindergarten and first grade students were receiving free lunch. The teacher's grades were used as the academic functioning measure in reading and mathematics. It was reported by the teachers that 58% of the students were doing above average work and 18% were performing in the below average range. Mobility was determined by the data collected at the school site and later forwarded to the centrally located research staff. A system monitoring the frequency of a student moving within and outside the school division was initiated. Consequently, mobility was decided when a student left the school during the year and the total number of moves made during the three year period of the study. Whereas, the nonmobile students did not leave a school during the three year period of the study. There were no differences found between the mobile and nonmobile student groups. However, the academic functioning measure was more authentic verses a standardized assessment measure. The academic functioning measure was highly dependent on the decision of the teacher. This academic functioning finding should be analyzed with caution. Without a valid and reliable

form of academic functioning measure, it was difficult to establish statistical significant.

Such a complex problem as school mobility deserved the attention of researchers. Various perspectives in defining and studying student mobility and its impact of student achievement must be investigated and reported to educators, families and policymakers. Jones (1989) decided to conduct a meta-analysis on the literature related to mobility and student achievement. After locating the studies, 93 studies were identified, six found a positive relationship between achievement and mobility, 28 found a negative relationship, and the remaining 59 studies concluded that there were nonsignificant relationships. The studies were researched from 1932 to 1987 involving students in kindergarten through twelfth grade. These studies reported data located in six countries. The sample population was diversified in all areas of diversity. Upon completion of the meta-analysis, study, Jones (1989) conducted an investigation focusing on three research questions: Are the achievement test scores of mobile students significantly different from the test scores of nonmobile, or permanent, students? Is there a relationship between the students' achievement and their rate of mobility? Is the relationship between the achievement test scores of mobile and nonmobile students affected by their ethnicity, gender, socioeconomic status (SES) or grade level of last move? From these questions, four null hypotheses relating to



the correlation and difference between reading and mathematics test scores were developed.

The concentrated population in the study, was third, fourth and fifth grade students in six elementary school in Waycross, Georgia enrolled during the 1985-86, 1986-87, and 1987-88 school years. Scales scores were used from the Iowa Test of Basic Skills on the reading and total mathematics subtests. The sample population included 2080 students from various socioeconomic backgrounds, gender, and ethnic groups. Information regarding the number of schools attended was provided by the students. Mobile students were the group of students who had attended at least two different schools since entering first grade. Nonmobile students were those who attended only one school since first grade. Findings related to student achievement and mobility were presented despite compelling evidence. Most of the achievement hypotheses were statistically nonsignificant, even though in some cases there were a higher mean test score of nonmobile students than mobile students. However, a strong indication from these results suggested that achievement was related to mobility factors. The differences between the means of the reading scores were statistically nonsignificant. The differences between the means of the mathematics scores were statistically significant at the third and fifth grade levels. There was a negative relationship between achievement in reading and mathematics and mobility at all grade levels.

The correlation was significant in reading and mathematics at the fifth grade level only. For these fifth grade students, as mobility increased achievement decreased significantly. One possible explanation offered regarding the results related to achievement and mobility was that several years before the study a standardized curriculum in reading and mathematics was implemented. No differences of significance might have been attributed to the inter-city mobility. Assuming that inter-city mobile students and nonmobile students received the same basic instruction then, the moves did not interrupt the continuity of curriculum (Jones, 1989).

Attendance and student mobility. Compulsory school attendance laws have continued to reflect the importance placed on school learning in California. Easton and Engelhard (1982) noted that Chicago Public Elementary Schools with the highest attendance rates most often received the highest test scores. Bloom (1976) suggested that while good attendance did not guarantee success in school, it was as important a factor as time on task and effort. It was for this reason that state departments have emphasized attendance in their efforts to improve student achievement. Schools were charged with monitoring attendance rates and responding appropriately when they declined. The challenge was greatly increased in inner-city schools with large downwardly mobile populations.

**Sewell (1982) examined the relationship between student mobility and attendance. Data were collected on third through fifth grade students in an inner-city school in Brooklyn, New York. Attendance was defined as: (a) 0-20 days absent, (b) 21-40 days absent, (c) 41-60 days absent, and (d) more than 60 days absent. Ten days absent per school year was the estimated normal attendance rate. Excessive absences were defined as ten or more days missed from school. The study found that attendance had an effect on mathematics and reading test scores of the nonmobile and mobile students. However, attendance had the greatest effect on mobile students. Whereas, attendance had the greatest effect on mobile students who had attended three or more schools. The majority of the mobile students fell in the excessive absence range of (b), (c), and (d). Various studies supported similar findings (Nelson, Simoni, & Adelman, 1996; New York State Department of Education, 1992).**

**The New York City Public Schools (1992) investigated student mobility and attendance as independent variables using several statistical analyses. Student mobility was found to correlate highly with elementary and middle school achievement. However, when the effects of other variables were included, attendance was found to be the most important and significant variable. The practical significance of this study was that for elementary and middle school students, staying in school was more important than staying in one school.**

Nelson, Simoni and Adelman (1996) studied 24 elementary schools in a large urban school division in the United States. The selected schools served kindergarten and first grade students from low-income households. Attendance information was obtained from school records. Attendance was calculated by absenteeism. The three category levels were: (a) absent once or more a month, (b) absent two or more times a month, and (c) absent more than four times a month. Conclusions derived from the study found that the nonmobile group had more students in group a than in groups b and c. Unlike the mobile group, which had more students in groups b and c than in group a. Findings indicated that nonmobile students were absent less than mobile students. The United States Department of Educational Research and Improvement (1996) confirmed that mobile students from low-income households were absent more than nonmobile students.

In the Cleveland Public Schools (1989) study, it was reported that nonmobile students had a higher attendance rate and more likely to have not dropped out of school than mobile students. The mean scores clearly showed a significant high attendance rate for mobile students (86.70) than nonmobile students (64.12). Test results supported these findings. Attendance was particularly important for downwardly mobile students because of the strong relationships between attendance and dropout rates (Easton & Storey, 1990).

Easton and Storey (1990) found that the combined attendance data from three elementary schools of mobile students indicated that school attendance was a predictor of high school dropout. Hammon and Olson (1988) found that the probability of dropping out of school increased with the number of moves, particularly for urban students. Furthermore, Hernan (1991) asserted that no curriculum can succeed if students were not in attendance to learn, develop, and advance in society. Increased attention is placed upon attendance in light of the negative consequences of dropping out of school. In conclusion, attendance and student mobility were examined in relation to student achievement and school dropout rate.

Adjustment and student mobility. Relocation required an adjustment period within any new school environment. The adjustment period for the at-risk mobile students may be significantly longer than for mobile students who were not at-risk. Unscheduled moves further challenged the coping skills of mobile students in many instances. The resulting loss of familiar family and school routines impacted on the emotional well-being of the students. Marlett (1993) identified peer relations as a main concern of transfer students. The lack of friends was one of the most daunting experiences facing transfer students (Orosan, Weine, Jason, & Johnson 1992). Friends helped navigate the territories of teacher expectations, school rules, homework, and play activities, and, therefore, played a critical role

during the transition period. Students must be encouraged to make friends in the new school environment.

Orthner, Giddings and Quinn (1987) found that 31% of students above the age of 10 reported having difficulty forming friendships compared with 10% of students between the ages of 6 and 10. The initial concerns of classroom teachers focused on unacceptable behaviors which appeared to be directly related to the emotional state of the transfer students. Similar findings supported by Lash and Kirkpatrick (1990) identified student mobility as affecting the classroom climate by creating a sense of impermanence, restlessness, and temporary friendships.

As early as the mid-sixties Kantor (1965) noted behaviors related to school relocations which included disbelief, anger, sadness, restlessness, aggression, nervousness, withdrawal, and depression. Such behaviors were often intensified in students who have experienced repeated school transfers. Kerbow (1996) found that downwardly mobile students were not equipped to handle the pressures associated with change when the move was not perceived as a positive move. The adjustment period, the time needed to assimilate into a new classroom environment was essential. Typically, within a few weeks the adjustment had occurred and the mobile student had resumed his previous pattern of behavior. However, problems prevailed when students did not successfully adjust to the new school environment.

**An investigation of interschool transfer conducted by Holland, Kaplan, and Davis (1975) revealed that mobile students brought histories of behavioral problems to the new school. Problems cited ranged from the infraction of playground rules to the blatant disregard for classroom routines. These inappropriate behaviors were frequently associated with mobile students to the new school. According to Wooster and Harris (1972) mobile students have less developed social skills than nonmobile students of the same intellectual ability and socioeconomic level. Seidenberg (1980) concluded that a move, whether by a 3 year old or a 14 year old, adolescent can cause stress which required an adjustment period. Mobile students in all age groups were more likely to encounter difficult periods of social adjustment than nonmobile students. Selected researchers during the 1980s reported that a move was viewed as more difficult as the student grew older due to the loss of established social networks (Brett, 1982; Stanton, 1987). In addition Brown and Orthner (1990) supported Coddington's (1972) finding that the period directly after a move was the most stressful of the transitional period.**

**Relocation in urban areas was frequently contingent upon availability of housing, which in some instances may actually promoted residential movement. Downwardly mobile families were sometimes unaware of the emotional trauma associated with student relocation. Cornille, Bayer, and Smyth (1983) stated that "social isolation and other factors that might accompany geographic relocation can**

have a profound long-term effect on the psychological, behavioral, and academic functioning of young people" (p. 230).

Morris, Pestaner, and Nelson (1967) found that upwardly mobile families transmitted a positive value system to their siblings, thus having fewer problems in adapting to new social and educational environments. An example of upwardly mobile students, would be Fairfax, Virginia. This area is representative of an upper-middle class suburban county located on the border of Washington, D.C. In Muller's (1982) study the focus was upward mobile students. Findings indicated that nonmobile and mobile students in two of the elementary schools located in Fairfax, Virginia were similar. No significant differences were found between the nonmobile and mobile students with respect to discipline and adjustment. Results indicated that the concerns of the family were mainly employment centered. In this study, the adjustment of students into a new school was not a problem. These mobile students were able to assimilate into the new learning environment without encountering any behavioral or adjustment problems. Adjusting, socializing, building positive relations, and assimilating in the new school environment become secondary in the transfer process which typically included a smooth adjustment period. On the other hand, a longitudinal study of inner city schools in Cleveland, Ohio, reported that nonmobile students differed from mobile students with respect to discipline. The nonmobile students were: (a) less likely to spend time in in-



school suspension, (b) almost as likely to have no out of school suspensions, and (c) more likely to have a lower percent of any type of suspension.

In today's classrooms, teachers implement cooperative learning strategies to develop social skills and build positive peer relationships. Furthermore, students are encouraged to perceive themselves as vital team members. Team membership is especially needed by high risk mobile students to lessen the stress of adjusting to the learning environment. Support from teachers is an essential element in the adjustment process of mobile students (Orosan et al., 1992).

Critical issues of retention. The practice of grade retention resulted in many students repeating a grade (Jackson, 1975; Rose, Medway, Cantrell, & Marcus, 1983). Grade retention continued to be a difficult decision regarding student placement for the next academic school year. The decision was based on data related to the social and academic performance of the students. School officials follow policies governing retention which included an examination of attendance records and family background data. Despite the controversy regarding the retention of students, the practice remained prevalent in most school systems (Rose et al., 1983).

Sandoval (1984) found that the retention decision may be incorrect even with the use of multiple criteria in making holistic decisions regarding retention. Studies have found that retention impacted negatively on student achievement and

had serious emotional and social consequences for students (Shepard & Smith, 1990; Slavin & Madden, 1989). Research by Grissom and Shepard (1989) concluded that when the variables of background , gender, and achievement of students were controlled, grade retention increased the likelihood of students dropping out of school. Klauder (1971) found that retention provided only a temporary improvement in achievement which was not maintained over a long period of time. Conversely, some educators reasoned that retention provided the time needed to remediate skills and allow emotionally immature students to develop (Jackson, 1975).

Slavin and Madden (1989) cited low achievement, retention, behavior problems, and poor attendance as contributors to the low graduation rates of the majority of disadvantaged students. The association between grade retention and dropout rates of high school students was well documented in the literature. A variety of studies support Shepard and Smith (1990), which demonstrated that the practice of retention did not achieve its goals of helping retained students function at grade level when compared with their same-grade nonretained counterparts (Jackson, 1975; National Association of Elementary School Principals, 1990; Niklason, 1984; Rose et al., 1983). Furthermore, the National Association of Elementary School Principals stated that “holding students back a year or more in elementary school has been found to increase the probability of their dropping out

of school without ever reaching high school" (1990, p. 17). In the United States, an estimated of 2.4 million students were retained annually, representing between 5% and 7% of all students (Shepard & Smith, 1990). In the most recent "High School and Beyond Study" Barro and Kolstad (1987) reported that sophomores who repeated at least one previous grade dropped out of school more than the nonrepeaters. Roderick (1994) found that students who repeated a grade dropped out of school more frequently than students who were not retained. Shepard and Smith (1990) found that retained second grade students scored 30% lower than nonretained second grade students on standardized test. All these studies suggested that retention impacted negatively on student achievement.

Wood et al. (1990) identified a strong relationship between frequency of relocation and retention for at-risk students. The prospect study conducted by the United States General Accounting Office (1994) revealed that mobile students were more likely to repeat a grade than nonmobile students. This same study noted that 20% of mobile students repeated a grade compared to 8% of nonmobile students. Leonard and Elias (1993) also found that mobile students were retained more than nonmobile students. While the research on mobile students and retention was limited, the findings indicated that mobile students were over represented as repeaters. Interestingly, the value of retention remained unsupported in the literature.

Students changed schools for academic, personal and family-related reasons. Those who made frequent changes can experience inappropriate placement in a new school, lack of continuity of lesson content, disruptions in social ties, and feelings of alienation. In general, students from low income families were more likely to change schools two or more times after entering first grade and before middle of eighth grade than were students where the annual family income was higher. (United States Bureau of Census, 1990).

Other critical issues. Student achievement is the ultimate outcome of school. Confronted with various challenges and issues, school remained a major influence in the lives of students. Although, parents expressed concerns about their children's academic performance, school appeared to play an important stabilizing role in their students' lives. While educators are encountered with more rigorous academic standards, increased accountability, and compared with various measures, critical issues involving the educational outcomes of mobile students began to escalate. Record keeping, dropping out of school and developing programs continue to be critical issues for schools. When the added burden of mobility is attached to these issues then, the pressure to ensure success becomes even more demanding.

The trend to monitor, assess and evaluate student performance must be addressed. Complaints from teachers described record keeping as a problem.

However, record keeping needs will not be de-emphasized but emphasized as the state of Virginia implements its state's criterion-referenced assessment plan. In Virginia, the Standards of Quality clearly delineated the need to monitor students being assessed and track which tests were passed in order to receive a verified unit of credit in high school. More recently, mobile students have created a new surge in record transfer. The United States General Accounting report (1994) described the massive task of tracking the nation's migrant students. A database was created known as the Migrant Student Record Transfer System (MSRTS). Not only was the system available and continued to be accessible but funding was provided to assist with educating these students. Modern technology such as the internet and fax machines are currently being used on a small scale to send vital information regarding some students. Transferring information regarding students is a common place event for schools. Moreover, when students move from school to school, the need to transfer records become even more a difficult task. In 1989, building on a project completed in Florida and Texas, a national system was designed to exchange student records more efficiently. Therefore, The Standardization of Postsecondary Education Electronic Data Exchange (SPEEDE)/Exchange of Permanent Records Electronically for students and schools (ExPRESS) electronic transcript system was developed for school districts with grades prekindergarten through twelfth.

**This system can transmit student academic records from one educational institution, agency, corporation, or other appropriate recipient in the United States and Canada. This is a very practical tool but is not widely used by educational systems. A major benefit of this system is using a standardized format for student records to enhance the interpretation of information. Software can be written or purchased to translate information from one school to another. Student records can be exchanged using computer-to-computer transmission, diskettes, or magnetic tapes. There are many benefits to using this system, some as cited by the National Center for Education Statistics (1993): (a) reduction of paperwork and associated savings by a one-time entry of student data, reduced errors, on-line data storage, and reduced clerical workload and, (b) more timely communications by rapid exchange of data and the elimination of mail charges and courier services. (p. 10)**

**Such a system could assist elementary and secondary schools in placing students into appropriate classes in their new learning environment. Implemented as prescribed, this system guarantees the security of the electronic transcript system. This record keeping system recommended that registrars, attendance secretaries and/or data processing personnel be alert and diligent to practice safe internal security measures. This system is still in its pilot stage, however, as it becomes more widely used, the need for changes will be identified and addressed. As**

record keeping becomes an issue in many states, the need to use electronic means to collect, store, and retrieve data will become demanding.

Recently, attention has focused on attendance as it relates to dropout rates. Hammon (1988) found that the probability of eventual dropping out of school increased with the number of moves particularly with urban students. The New York State Department of Education (1992) revealed that students changing schools four or more times more likely to dropout of school than those students who remained in the same school even when socioeconomic factors were taken into account. Student mobility has an impact on dropping out of school. Using national data, Comer (1989) reported that when a family's socioeconomic status was held constant, the dropout rate for high school students was 11.8% for families who did not move, 16.7% if the family moved once and 23.1% if the family moved twice. These percentages were quite significant. A partnership exists among school attendance, student mobility and dropping out of school. Such a partnership is dangerous and continues to be a critical issue towards the path of high expectations and enhanced student achievement.

Many effective programs are being designed or have existed during the restructuring of schools. Recognizing its problems with the high concentration of mobile students a plan of action was needed. In Chicago Public Schools Jason et. al., (1990) discussed various programs implemented to assist the mobile

population in their schools. An attempt made to provide each student with an educational program flexible enough to meet his needs. Naturally, many of the students had a family background reflecting downward mobility in this school system. Therefore, a project was funded with a grant from the Ford Foundation. In Chicago Public Schools, there were over age-under achievers, potential dropouts and unmotivated students in their elementary schools. The following was a list of programs implemented in Chicago Public Schools:

1. The development of educational and vocational guidance centers for over aged elementary students.
2. The after-school reading classes initiated enabled the libraries to have extended hours and homework rooms were created.
3. Staff members had continuous staff development focusing on disadvantaged mobile students.
4. Preschool centers had Head Start and other types of preschool programs along with child-parent educational centers.
5. Special summer school sessions designed specific for transient students.
6. A series of special programs such as urban youth programs, non-English students support services, after school clinics, cultural enrichment programs, back to school drives and social programs where attempts were made to assist mobile students. (p.10)



These were only a few critical issues that will lead the debate regarding educating and recognizing the unique needs of urban mobile students. School mobility will advance to the political agenda as barrier tests, benchmarks for standards, and achievement factors usher into the school accountability formula.

The effects of movement – a migratory existence on a student is and continues to be traumatic and difficult to overcome. Pittman (1975) categorized students with frequent movement as migrant or transient. Transient students were identified as mobile students who travels with their parents or relatives from one geographic location to another, usually less frequently than the migrant, but on the average of one or twice each school year. In this study five major characteristics were identified as barriers in which transient students must cope with and adjust to:

1. problems of becoming totally integrated into the classroom because of lagging records
2. peer rejection until he has proven himself worthy of acceptance by some system he must first discover
3. adjustment to a new teacher
4. adjustment to a new principal
5. adjustment to a different curriculum, possibly involving a different approach to basal reading instruction. (p. 4)

In an effort to decrease these barriers, orientation programs, tours of the school facilities, and explanations of policies, curriculum and extra-curriculum activities were implemented to ease the transition. However, one problem still remained, that was how to expedite sending and receiving records for those students. In the state of Louisiana, Pittman reported (1975) that the community approached the school board to provide a facility for students who were mobile (transient) and migrant. Local and federal funds allowed the school district of Tangipahoa Parish, to erect a new school facility for both of these student populations. This school implemented the full service model which consisted of teachers, aides, dental care, eye examinations, social worker, transportation and other necessities for a sound program (Pittman, 1975). An expansion of the program created a "home-based" school with the facility open to students during the summer for extensive summer school. By using the Migrant Student Record Transfer System, to readily access student record, this model was making progress with these mobile populations. However, many problems were encountered but strategies were implemented to resolve them. The federal funds from the Department of Health, Education and Welfare were stopped. The survival of the school model will depend on the funding of state and local funds. Until a true commitment is made on behalf of mobile students, these students have the profiles and situational circumstances to become dropouts.

## **Chapter 3: Methodology**

### **Introduction**

**This study assessed the impact of mobility on student achievement through an examination of attendance, discipline referrals, and retention. The study focused on the mobile and nonmobile student populations at one urban elementary school. This investigation sought to explore the relationship of mobility and student achievement by analyzing data regarding student attendance, discipline referrals, and retention.**

### **Null Hypotheses**

- 1. The mathematics achievement of mobile students is not less than ( $p < .05$ ) that of nonmobile students.**
- 2. The reading achievement of mobile students is not less than ( $p < .05$ ) that of nonmobile students.**
- 3. The school attendance of mobile students is not less than ( $p < .05$ ) that of nonmobile students.**
- 4. The discipline referrals of nonmobile students are not less than ( $p < .05$ ) that of mobile students.**

5. The grade retentions of nonmobile students are not less than ( $p < .05$ ) than mobile students.

### **Research Design**

This study used an ex post facto research design. The aim of the study was to examine differences between mobile and nonmobile groups. These groups, of course, cannot be manipulated or randomly assigned. Borg and Gall (1989) stated that the causal-comparative design did not allow the researcher to study cause-and-effect relationships in situations. Consequently, this design can only infer patterns. The results of the study should enable local school personnel to better understand the impact of mobility on student achievement.

**Independent variable.** The independent variable was mobility. Students were classified as mobile or nonmobile based on the number of moves from school to school.

**Dependent variables.** The first dependent variable was achievement as measured by the Iowa Test of Basic Skills scale scores located on the mathematical and reading subtests for two consecutive years. The second dependent variable was attendance as measured by the record of total days students were present in a given school year. The third dependent variable was discipline referrals as

measured by the number of infractions against the rules and regulations of the school as recorded by the school administrator. The fourth dependent variable was retention as measured by the total number of times that a student had repeated a grade.

### Sample Frame

This study was conducted in one elementary school located in central Virginia. Archival data were analyzed from the records of students in fifth grade during the 1994-995 and 1995-1996 school years. The total student population for the 1994-1995 school year was 134 students and in 1995-1996 was 110 students. The racial composition of these students during the 1994-1995 school year was as follows: 55% African-American, 40% Caucasian, 4% Hispanic, and 1% Asian. For the 1995 - 1996 school year the racial composition was 56% African-American, 41% Caucasian, 2% Hispanic, and 1% Asian. There were 43 mobile and 91 nonmobile students in 1994-1995. In 1995-96, there were 42 mobile and 68 nonmobile students. Data from the students' scholastic and directory information records categorized the students as mobile and nonmobile. In addition, attendance records, the number of retentions, and discipline referrals were located in the students' scholastic records. These students participated in the spring testing program using the 1986 edition of the Iowa Test of Basic Skills

(ITBS). The study did not include upwardly mobile, migrant, military, or special education students enrolled in a regional program.

### Instrumentation

The Iowa Test of Basic Skills (ITBS), a norm-referenced test, provided information regarding the strengths and weaknesses in instructional programs. The obtained data assisted in the instructional decision making process. The scale scores on the reading and mathematics subtests were used to assess student achievement. The 1986 edition Form H was administered to the fifth grade students in the spring of 1994-95 and 1995-96 school years. In The Tenth Measurements Yearbook Linn (1989), two reviews were presented related to Form H of the ITBS. The yearbook review by Linn (1989) found a positive correlation between the comparison of item content in the relationship to the instructional objectives. Similarly, Wilson (1989) revealed that the ITBS is an appropriate standardized test when the curriculum presented and the content of the test correspond.

Approximately 5,000 students per grade were used in establishing spring norms in 1984 (Hieronymus & Hoover, 1986). Criteria used in selecting the representatives for the sample were based on region, size of the school districts, family income, and education. Test items were developed by a diverse group of educators from various cultural and geographic backgrounds. Internal consistency

reliability coefficients ranged from .68 to .92 for the individual test scores and the composite reliability was .97 (Hieronymus & Hoover, 1986). The evidence for reliability and validity on the ITBS was in accordance with the standard reliability coefficients ranging from .70 to .90 (Kramer & Conoley, 1992). The ITBS was congruent to the Kuder-Richardson Formula reliability coefficients for internal consistency ranging from .90 to .92 in reading and .93 to .94 in mathematics (Keiss, 1989). The ITBS was a reliable norm-referenced test to use in this study.

#### **Data Collection Procedures**

The researcher recorded the fifth grade scale scores from the 1994-95 and 1995-96 Iowa Test of Basic Skills on the reading and mathematics subtests. Data on attendance, discipline referrals, and retentions were obtained from directory information located in the scholastic records of students. Attendance data were validated by using the principals monthly report data printouts. Some standardized test scores had to be located in the Iowa Test of Basic Skills booklet. Calls were made to several school divisions to obtain test scores. Students who were in the fifth grade during the 1994-95 school year scholastic records were located in the middle school. This required identifying students who attended the elementary school used in this study. Attendance secretaries assisted in validating data to make sure that the numerical values were accurate. Most of the cumulative folders had a listing of previous schools and the year in which students attended

those schools. Other means of securing information were searching through cumulative folders to locate report cards or grade sheets, letters from various school addresses and registration information. In Virginia, the school division code numbers and the first identification numbers assigned assist in determining movement of a student. The Virginia Board of Education developed the Outcome Accountability Project (OAP) in 1988. The purpose of the OAP report was to provide educators with the information needed to plan and implement changes that will result in increased student achievement based on local needs. Additional data were collected on these students as fourth graders from the Virginia Department of Education's Outcome Accountability Project (OAP) reports. This data showed the percent of fourth graders who were fifth graders in this case study with (a) composite scores above the national 50th percentile, (b) percent of students over age for grade placement, and (c) attendance indicators for students in grades kindergarten through fifth grade. These data were collected and analyzed to determine the impact of mobility.

#### Data Analysis

A one tailed t-test for independent samples was utilized for comparisons of the mobile and nonmobile groups on reading and mathematics subtests of the Iowa Test of Basic Skills. A one tailed t-test was used to compare the mobile and nonmobile groups on attendance, discipline referrals, and retentions as recorded in



the scholastic records of fifth grade students for the 1994-95 and 1995-96 school years.

#### **Ethical Safeguards and Considerations**

This study was conducted in a manner to protect the anonymity of the school and students. The research plan was developed so there would be no need to include the names of students, teachers, administrators, or schools. An informational letter was sent to the superintendent to request permission to use student scholastic records, guarantee confidentiality of student data, and to adhere to the appropriate research practices set forth by the Human Subjects Review Committee for the School of Education at the College of William and Mary in Williamsburg, Virginia. Results of the study may be shared with the person in charge of research assessment in this school division.

## **Chapter 4: Analysis of Results**

**The purpose of this study was to determine the impact of mobility on fifth grade students in one urban elementary school located in central Virginia. The obtained data were from directory information records and reports for these fifth grade students for the 1994-95 and 1995-96 school years. The sample consisted of 244 fifth graders. Specifically, the study analyzed the demographic characteristics of mobile students and investigated the impact of mobility on academic achievement, attendance, discipline referrals, and retentions.**

**This study used an ex post facto research design. A one tail t-test was used to determine whether a significant difference existed between the mobile and nonmobile students. The dependent variables were achievement in math and reading, attendance, discipline referrals, and retentions. The t-test made adjustments for unequal variances. A .05 level of significance was used in all analyses.**

### **Description of Existing School Programs**

**The school has made a concerted effort to meet the needs of students. The following innovations were specifically designed to improve student achievement. The school utilized James Comer's model to enhance the home/school relationship**

and to improve student achievement. A plan was implemented to build a strong partnership with the community. The staff toured the school zone at the beginning of the school year, visited the homes of students on a regular basis, and extended an open invitation to the local policemen to have lunch in the cafeteria with the students. The firemen served as tutors in addition to providing fire safety instruction. A bi-monthly Family Learning Night was instituted to strengthen the home/school bond. Activities were planned to promote a positive attitude toward school. These efforts were made to support the philosophy of building a community of learners within the school and the neighborhood.

Instructional personnel were matched to classroom assignment by their experience and the needs of the students. Students were placed into heterogeneous self-contained classrooms. A flexible block schedule was used to meet instructional needs following periodic assessment of student learning. Two reading resource teachers and an additional guidance position were added to the staff. Furthermore, an instructional aide was employed to coordinate home/school visits and conduct follow-up tutoring sessions. Several early intervention programs were developed with federal Title I funds which included Reading Recovery, First Heroes literacy model, and before-and after-school tutoring.

The school developed a technology plan, which included a progressive staff development component for teachers as well as increasing the number of

computers, calculators, laser discs, and technical tools. A variety of software was purchased. A Writing-to-Read computer-based laboratory has been used for kindergarten and first grade students. A separate computer laboratory has been used by students in grades 2 through 5. In addition, the media center consisted of 14 computers containing a variety of software packages for the entire school. Each classroom had a minimum of one computer, which has both media center and internet access.

#### Demographics of the Sample

The elementary school, built in 1993, is located in an small urban school division. The total enrollment of the school in 1994-95 was 725 and in 1995-96 was 752. Approximately 60% of the students received free or reduced lunch. Many of these students were from disadvantaged homes, which allowed minimal exposure to literacy. The racial composition of the student body during the 1994-95 school year was as follows: 55% African-Americans, 40% Caucasian, 4% Hispanic, and 1% Asian. For the 1995-96 school year, the racial composition was 56% African-American, 41% Caucasian, 2% Hispanic, and 1% Asian.

Table 1 presents the findings from the Outcome Accountability Project (OAP) school report for these fifth graders as fourth graders during the 1993-94 and 1994-95 school years. Of the total class membership who took the Virginia State Assessment Program under standard conditions, the composite scores during

the 1993-94 School year revealed that 56% of the students scored above the national 50th percentile. The same assessment program for the 1994-95 school year showed that 50% of the students scored above the national 50th percentile. On the same school report for the 1993-94 school year, 72% of the students in grades K-5 were absent less than 10 days from school. In 1994-95, 74% were absent less than 10 days from school. Both years showed that 3% of the students were 11 or more years of age.

The Virginia Department of Education Outcome Accountability Project assists educators and the public in determining the success of schools. The report used the students' achievement data to assist school divisions in implementing changes and enhancing student learning and performance. The three outcome indicators listed in Table 1 were above the school division's percentages on the standardized test scores and attendance indicators. However, the percentage of over age students was less than or equal to the other elementary schools in the school division. The percentages on the standardized test scores and attendance were lower than the State of Virginia indicators, but the over age students were less than the State of Virginia indicators. The results on Table 1 showed that at this urban elementary school, approximately 70% of the students were attending school on a regular basis each year. School wide attendance was high however, the state's outcome indicator was set at 76% and 78% for the 1994-95 and 1995

school years. The state's indicator for the number of students scored above the national 50th percentile was established at the 63rd percentile. Although, the school in this study

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**Table 1**

**Indicators from the Outcome Accountability Project School Report**

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<b>Outcome Indicators</b>	<b>1993-94</b>	<b>1994-95</b>
<hr/>		
<b>Fourth Grade Standardized Test Scores (above the 50th percentile)</b>	<b>56%</b>	<b>50%</b>
<b>Attendance (K-5) (percentage absent less than 10 days)</b>	<b>72%</b>	<b>74%</b>
<b>Over age 4th Grade Students (students over 11 years of age)</b>	<b>3%</b>	<b>3%</b>

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was at the 50th percentile, this school did not meet the state's established score.

Therefore, the students in this school were below the state's outcome indicator, scoring 56% for the first year and 50% during the second year. What appeared to be good results with the school division did not meet the state's benchmarks.

Meanwhile, this population of students did not meet the state's benchmarks.

Moreover, the population of students in this school was making significant progress within the local school division.

Table 2 presents the data for attendance, discipline referrals, and retentions for the two groups of students used in this study. Attendance was indicated by the total number of mobile and nonmobile students who were absent 10 days or less from school for each of the designated years. Discipline referrals were measured by the number of referrals received for a behavioral infraction by a teacher or an administrator. Retention was indicated by the number of students retained one or more times. This data showed that among the mobile students on all variables there were more students from the total population of mobile students who had missed 10 days or less, received discipline referrals, or had been retained in a grade. The mobile and nonmobile students for both years had good attendance thus correlating with the OAP report results. Approximately, 30% of the mobile students received discipline referrals compared to less than 20% of the nonmobile students for the 2 years studied. Less than 20% of the nonmobile students received one or more retentions during the 2 year period. However, approximately 40% of the mobile students had received one or more retentions.

Table 3 presents the findings on means and standard deviations for mobile and nonmobile student groups for 2 consecutive years on the five variables studied. The mobile student groups were subjected to a directional t-test for independent

samples. The mean scores for both years were greater for the nonmobile groups than for the mobile groups on the mathematics and reading achievement variables. Using the corrected t-test for attendance, discipline referrals, and retention, the mean scores for both years were less

**Table 2**

**Indicators for Mobile and Nonmobile Students**

Indicators	Mobile (n=85)		Nonmobile (n=159)	
	1994-95	1995-96	1994-95	1995-96
	n=43	n=42	n=91	n=68
Attendance (absent less than 10 days)	95.3%	76.1%	93.4%	85.2%
Discipline Referrals (more than one)	34.8%	33.3%	23%	22%
Retentions (one or more)	41.8%	45.2%	20.8%	19.1%

for the nonmobile groups. The findings for the five variables were significant at the .05 level. A closer examination revealed that the two sample means for



mathematics achievement were 130.8 scale score for the nonmobile group and 125.4 scale score for the mobile group differed significantly at the .05 level. The observed difference between these mathematics achievement means could be due to the effect of mobility. When mobility was a factor, achievement scale scores of students in mathematics were lower. On the other hand, the significant differed in a practical manner. Scale scores of 130.8 and 125.4 were ranked in the same quartile. However, the difference in the scores showed that the nonmobile students had made more growth in mathematics achievement during the 2 year period than that of the mobile students.

The sample means for reading achievement were 131.4 scale score for the nonmobile group and 126.9 scale score for the mobile group differed significantly at the .05 level. The observed difference between these reading achievement means could be due to the effect of mobility. When mobility was a factor, achievement scale scores of students in reading were lower. Also, the significant differed in a practical manner. Scale scores of 131.4 and 126.9 were ranked in the same quartile. However, the difference in the scores showed that the nonmobile students had made more growth in reading achievement during the 2 year period than that of the mobile students.

The sample means for attendance revealed the nonmobile students were absent 3.6 out of 10 days or less and mobile students were absent 5.6 out of 10

days or less. From a practical perspective this difference is nonsignificant however, it could mean the difference between getting a call or letter regarding attendance to receiving a visit from the attendance officer. This practical difference of .54 between the mobile and nonmobile students in the number of discipline referrals could determine the level of punishment. Mobile students had a

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**Table 3**

**Means and Standard Deviations of Mobile and Nonmobile Students**

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Variables	Nonmobile		Mobile	
	n = 159		n = 85	
	Mean	SD	Mean	SD
Mathematics Achievement	130.83	11.93	125.49	9.96
Reading Achievement	131.41	16.09	126.90	11.85
Attendance	3.67	4.60	5.64	5.44
Discipline Referrals	.76	1.70	1.37	2.45
Retention	.21	.41	.55	.58

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greater number of retentions than nonmobile students. Various reasons could attribute to this difference.

#### Tests for the Impact of Mobility Status

Hypothesis 1 states that the mathematics achievement of mobile students is significantly less than ( $p < .05$ ) nonmobile students. Mathematics achievement was measured by the students' scale scores on the Iowa Test of Basic Skills. Table 4 presents the findings that  $t(242) = -3.518$ ,  $p < .05$ , which was statistically significant. The difference between the mathematics achievement means of mobile students was significantly less than nonmobile students at the  $p < .05$  level.

Hypothesis 2 states that the reading achievement of mobile students is significantly less than ( $p < .05$ ) nonmobile students. Reading achievement was measured by the students' scale scores on the Iowa Test of Basic Skills for two consecutive years. Table 4 presents the findings that  $t(242) = -2.274$ ,  $p < .05$ , which was statistically significant. The difference between the reading achievement means of mobile students was significantly less than nonmobile students at the  $p < .05$  level.

Hypothesis 3 states that the attendance of nonmobile students is significantly less than ( $p < .05$ ) mobile students. Attendance was measured by the number of days absent from school in a given year. Table 4 presents the findings that a corrected  $t(148.945) = 2.836$ ,  $p < .05$ , which was statistically significant.

**Table 4****T-test for Mobile and Nonmobile Students**

<b>Variables</b>	<b>t value</b>	<b>p value</b>
<b>Math Achievement</b>	<b>-3.518</b>	<b>.001</b>
<b>Reading Achievement</b>	<b>-2.274</b>	<b>.024</b>
<b>Attendance</b>	<b>2.836</b>	<b>.005</b>
<b>Discipline Referrals</b>	<b>2.038</b>	<b>.044</b>
<b>Retention</b>	<b>4.736</b>	<b>.000</b>

The difference between the attendance means of nonmobile students was significantly less than mobile students at the  $p < .05$  level.

Hypothesis 4 states that the discipline referrals of nonmobile students is significantly less than ( $p < .05$ ) mobile students. Discipline referrals were measured by the number of referrals received for a behavioral infraction by a teacher or an administrator. Table 4 presents the findings that a corrected  $t(128.133) = 2.038$ ,  $p < .05$  which was statistically significant. The difference between the discipline

referrals means of nonmobile students was significantly less than mobile students at the  $p < .05$  level.

Hypothesis 5 states that the grade retention of nonmobile is significantly less than ( $p < .05$ ) mobile students. Grade retention was measured by the number of times that a student had been retained. Table 4 presents the findings that a corrected  $t(129.047) = 4.736$ ,  $p < .05$  which was statistically significant. The difference between the retention means of nonmobile students was significantly less than mobile students at the  $p < .05$  level.

#### Summary

- Indicating that the nonmobile students did have significantly higher mathematics achievement than mobile students, the data allow for the rejection of the first hypothesis.
- Indicating that the nonmobile students did have significantly higher reading achievement than mobile students, the data allow for the rejection of the second hypothesis.
- Indicating that the nonmobile students did have significantly higher attendance than mobile students, the data allow for the rejection of the third hypothesis.
- Indicating that the mobile students did have significantly higher number of discipline referrals than mobile students, the data allow for the rejection of the fourth hypothesis.

- **Indicating that the mobile students did have significantly higher number of retentions than nonmobile students, the data allow for the rejection of the fifth hypothesis.**

**In conclusion, this ex post facto study revealed that a strong relationship exists between the independent variable of mobility status and the dependent variables of mathematics and reading achievement, attendance, discipline referrals, and retention. Recent reform in education continues to emphasize rigorous academic standards and increased accountability. These findings suggested that mobility was a major consideration in the effort to improve student achievement.**

## **Chapter 5: Conclusions, Discussion, Implications, and Recommendations for Further Research**

**This causal-comparative study determined the impact of mobility on fifth grade students in one urban elementary school. A comparison of mobile and nonmobile students revealed that the nonmobile students obtained higher test scores in mathematics and reading than the mobile students. Furthermore, attendance rates were significantly better for the nonmobile students who also had fewer discipline referrals and grade retentions. This present study supported previous research that frequent school transfers impact negatively on school achievement, attendance, discipline, and retention (Jason et al., 1990; Kerbow, 1996; New York State Education Department, 1992; United States General Accounting Office, 1994).**

**The design of the study was ex post facto. The sample consisted of 244 fifth grade students. The data were collected and analyzed for two consecutive years. The data included the scale scores on the Iowa Test of Basic Skills, the number of days absent from school, the number of referrals received from a teacher or an administrator, and the number of times a student repeated a grade.**

The students were categorized as mobile or nonmobile based on the established operational definitions.

The hypotheses investigated in this study, stated in the null form, were:

1. The mathematics achievement of mobile students is not less than ( $p < .05$ ) that of nonmobile students.
2. The reading achievement of mobile students is not less than ( $p < .05$ ) that of nonmobile students.
3. The school attendance of mobile students is not less than ( $p < .05$ ) that of nonmobile students.
4. The discipline referrals of nonmobile students are not less than ( $p < .05$ ) that of mobile students.
5. The grade retentions of nonmobile students are not less than ( $p < .05$ ) that of mobile students.

The following conclusions, discussion, and implications need to be regarded in the light of the following limitations of the study. This case study excluded migrant, military, and special education students housed in this school.

### **Conclusions**

This study explored the school-based performance of mobile and nonmobile students over a two-year period. One hundred forty-six fifth graders during the 2 years received free or reduced lunch. Eighty-five of these students



were mobile and 159 were nonmobile. Statistically significant differences were found between the two groups.

The achievement variable is the major factor used by schools to determine progress. This study revealed a significant difference between the mathematics and reading achievement of mobile and nonmobile students. The mathematics and reading achievement scores of the nonmobile students were significantly higher than mobile students. Therefore, the first and second null hypotheses were rejected.

Attendance is a major concern in many schools. The research indicates that it is more important that students come to school than whether or not they engage in constant moving. Mobile students need access to instruction, make connections, and build relationships. There was a significant difference between mobile and nonmobile students' attendance. The number of days absent was significantly higher for mobile students than the number of days absent for nonmobile students. Therefore, the third null hypothesis was rejected.

The interventions to decrease the number of student discipline referrals merits exploration. The mobile students, families, and school must recognize that an adjustment is necessary in a new learning environment. Adjustment to various types of learning environments requires attention on the part of the mobile student, his or her family, and the school. This is true for all students, especially mobile

students. Often times, the adjustment is difficult and learning is interrupted, which results in a discipline referral. There was a significant difference between mobile and nonmobile students' discipline referrals. The mobile students received a higher number of discipline referrals than the nonmobile students for various infractions. Therefore, the fourth null hypothesis was rejected.

Traditionally, retention reflected the inability of the students to meet minimum promotion standards established by a school division. Retention, as measured by the number of times that a student has repeated a grade, indicates that mobile students experience more retentions. Frequent transfers of mobile students result in a disparity of curriculum access between the mobile and nonmobile students. In comparing the two groups of students, the mobile students had more students receiving one or more retentions than the nonmobile students. There was a significant difference between the number of mobile and nonmobile student retentions. Therefore, the fifth null hypothesis was rejected. The results of the study demonstrated that mobility negatively impacted student achievement in mathematics and reading, attendance, discipline referrals, and retention.

### Discussion

Many of these students were from disadvantaged homes which allowed minimal exposure to literacy. The majority of this population was African-Americans. While the school has no control over the socioeconomic realities of

the school population, the challenge remains to meet the academic need of all the students. The school, however, is able to analyze and implement strategies specific to decreasing the negative impacts of student mobility.

The findings in this study support Mehana and Reynolds' (1995) and the New York State Education Department's (1992) results that mobility is a significant factor in student achievement in the urban elementary school. Mobile students have the responsibility to accept change and adapt to different learning environments. However, the teacher needs to become an advocate for mobile students. It is crucial that the teacher assists mobile students to adjust and assimilate into the new classroom culture. When mobile students are examined through the lens of the ecological perspective, the inclusion of the family, school, and community can collaborate to aid mobile students in making a smooth school transition. The family, school, and community must work together to ensure the academic success of their students.

Results from this study are in agreement with much of the previous research (Jason et al., 1990; Kerbow, 1996). Living in today's highly technical society allows family migration to occur with ease. The movement of a family is not the decision of the student. While the research reveals the effects of living at a low SES status and mobility may negatively influence student achievement, the family remains the central institution in students' lives. This is true because parents

are the first teachers and role models of students. Initially, students acquire the value system of the family. The experiences exposed to in the home environment remain with some students at school. Consequently, if mobile students do not see their parents trying to eradicate living in low socioeconomic conditions, then the effects of at-risk economic and environmental factors in these households might surface at school. The students might become preoccupied with home related issues and conditions that it becomes difficult to concentrate on school studies. Such factors could delay the acquisition of reading and mathematics skills or cause the adjustment period of mobile students to be detrimental. Mobility is an additional at-risk factor to impede sufficient educational opportunities. Mobile students need infrastructures in place that promote, not imperil, their life chances. Society needs to join forces to prevent students from becoming at-risk due to mobility. Mobile students deserve the right to acquire an equitable education.

Efforts to encourage mobile students to attend school on a regular basis are a necessity. School attendance is one means to ensure that a student is exposed to the curriculum and has a chance to acquire skills to succeed in society. It is crucial that attendance be monitored and families assisted in adhering to compulsory attendance laws. Nelson, Simoni, and Adelman (1996) noted that nonmobile students had more absences than mobile students. A similar trend was found in the present study.

**The family is responsible for equipping students with the social skills to interact appropriately in any environment. Family value systems, peer networks, and atmosphere of the new school environment directly affect the social adjustment of mobile students. Relocation may bring about emotional trauma. The stress of the move and fear of a new school environment may create many uncertainties. The conclusions in this study support the review of the literature which notes that the acquisition of positive social skills and the development of peer relationships are essential to a successful adjustment period for a smooth transition for mobile students.**

#### **Implications for Practice**

**The major implication of this case study is to provide school administrators, teachers, parents, and policymakers with an additional critical review to support the findings of this study. The challenge is for the three stakeholders--the family, the school, and the policymakers--to become advocates for the mobile students. Each of these educational partners need to become aware of the impact that mobility has on student achievement. The resulting commitment should reflect shared responsibility for the advancement of mobile students. Each of these educational partners needs to become aware of the impact that mobility has on student achievement. The resulting commitment should reflect shared responsibility for the advancement of mobile students.**

**The prime responsibility of the mobile family is to maintain a stable environment during the transition to a new school. Open and honest communication about the impending move will ease the transition. Social networks need to be established as families explore the neighborhood to highlight the positive aspects of the new neighborhood. Parents need to accompany the students to school in order to participate in the orientation and enrollment process. Data on previous school enrollments need to be collected for entry into schools' scholastic records.**

**At this point, the responsibility of the mobile students belongs to the school. The teacher should utilize strategies which foster a sense of belonging in the classroom. This initial interaction between the teacher and the student is critical to the establishment of a trusting relationship. It is the responsibility of the school to provide teachers with continuous staff development in order to ensure the assimilation of mobile students into the classroom. Initial placement and further documentation should reveal strengths or deficiencies in reading and mathematics.**

**In order to intervene on behalf of these students, educators, policymakers, and families must attempt to eliminate the barriers that impede mobile students. The following is a list of specific intervention strategies that all stakeholders can utilize when eliminating some barriers confronted by mobile students.**

**Educators:**

1. Teachers should integrate learning materials and resources focused on mobile students into the regular curriculum. Both fiction and nonfiction books relating to students who move and/or experience changes in the family should be a part of the class' library. Teachers should read those titles to the students and include adaptations in the science curriculum.
2. In spite of the lack of time, teachers need to assign student helpers to new students.
3. Guidance counselors need to have regularly scheduled group counseling sessions for identified mobile students.
4. Principals, as instructional leaders, should plan viable staff development centered around identification of mobile students and the implementation of effective strategies to increase achievement and to ensure social adjustment.
5. Parent conferences should be scheduled during registration and a team home visit is recommended.
6. Remedial services such as before-and after-school programs should be arranged if placement assessments or previous school records indicate a need.
7. Students should be assessed to determine placement and learning materials needed to meet the students' needs.

8. A school-wide spirit programs should be initiated to build students' sense of self-worth and to assist in assimilation into the new school's culture.
9. Students should be trained in conflict resolution or peer mediation.
10. Mobile students may be considered for placement into ungraded classes or with a class of students "looping" (students remaining with one teacher for more than one year and, therefore, not having to be retained).
11. Communication should be frequent and on-going. Parents should be educated in regards to mobility and its impact on student achievement.

**Policymakers:**

1. State board of education should adapt policies to help lessen the impact of mobility by considering a uniform curriculum (New York State Department of Education, 1992).
2. Local school boards, with the assistance of the state boards of education, should use advancement in technology such as the Internet as a mode to expedite the transfer of school records while maintaining confidentiality. These schools boards should investigate the usage of the Migrant Student Transfer System (MSTS), an electronically based record system used in the United States and Puerto Rico or the national system known as the Standardization of Post-Secondary Education Electronic Data Exchange (SPEEDE)/Exchange of



**Permanent Records Electronically for Students and Schools (ExPRESS), an electronic transcript system for prekindergarten through twelfth grade.**

**3. State board of education should pursue the usage of the national record transfer system being piloted by the National Center for Education Statistics and the Council of Chief State School Officers.**

**4. State boards of education need to decide on an operational definition for mobile students and develop a uniform data-keeping format for an electronic monitoring system.**

**5. Local school boards would be prudent to rethink having well-defined school zones without taking into consideration the impact mobility has on achievement.**

**Families:**

**1. Parents should provide information with the receiving school regarding mobile students' background, abilities, and needs.**

**2. Parents need to create an open relationship with the school officials.**

**3. Parents should avoid moving until the end of the academic year if a move is absolutely necessary.**

**4. Parents need to monitor students' performance on a regular basis.**

**5. Parents need to acquaint their students to the new neighborhood.**

**6. Parents need to become proactive and involved with the schools.**

**Additional services such as remediation, tutoring, summer school, or inclusion in federal programs would improve the academic progress of mobile students. The availability of these support services should be emphasized in the mobile student section of the parent and student handbook similar to programs for gifted or disabled students.**

**Mutual support between the mobile family and the schools should result in new policies specific to the needs of mobile students. Policymakers are responsible for establishing policies to enhance equitable educational opportunities for all students. To ensure that mobile students receive sufficient services specific to their unique needs, the policies must address flexible accommodations for mobile students. For example, the school in this study resides in a school division which has a variance policy for students who transfer during the year. The policy allows the moving family to request a variance to remain at the school until the end of the semester and provide transportation. This does assist with stabilizing the mobile student population at least until the end of the semester. However, if transportation could be arranged outside school zones within the same school division, then intra- student mobility could be better controlled and monitored. Such policies could be examined as to how to integrate the concept of flexible accommodations in regards to mandates from the local, state and federal levels. The results of such policies should support the establishment of full service**

**schools. Finally, the State Department of Education should establish an inclusive electronic management system to expedite the flow of student data between local schools, school divisions, and states.**

#### **Recommendations for Further Research**

**Further research in the area of student mobility is needed. Limited research exists in investigating this critical issue. As with most research, more reliable studies will assist with substantiating findings:**

- 1. There is a need for further research concerning the impact of retention and student mobility. This area has not been investigated to the extent of student achievement and student mobility.**
- 2. There is a need to replicate this study once Virginia has received results on its new state assessment program and its relationship to the Standards of Learning (SOL). The research could analyze whether having a core set of knowledge has a significant impact on the achievement of mobile students.**
- 3. Further research should focus also on the number and kinds of discipline referrals that mobile students receive and the impact on student achievement.**
- 4. Further research could also take the form of a follow-up study to replicate the impact of student achievement and student mobility by using other achievement data as indicators to measure student achievement. Such data could**

include task performance assessment, report cards, or state criterion-referenced tests.

5. Further research is needed which might focus on another group of urban students with a significant Hispanic or Asian population.

Overall, future studies also may involve more detailed analyses of the findings revealed by this study.

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