A MIXED METHODS INQUIRY INTO THE RELATIONSHIP BETWEEN BELONGINGNESS AND ACHIEVEMENT OF MIDDLE SCHOOL TRANSFER STUDENTS

by

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A DISSERTATION

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ABSTRACT

Student achievement is closely monitored and is believed to reflect how well a school is serving its student population therefore; it is incumbent upon schools to investigate a means of improving student achievement. As the number of students transferring to suburban school settings continues to increase, it has become increasingly important to determine how to assist these students in successfully transitioning into their new school environment. This study explored how sense of belonging affects achievement motivation and academic achievement for seventh grade and eighth grade transfer students in affluent suburban middle schools in the Southeast. With the degree of difficulty that students of varying ethnicity, gender, socioeconomic status, and achievement motivation are experiencing in adjusting to their new school, which tends to reflect the dominant culture of our society, a means of assisting these students in achieving academically is greatly needed.

In the first, quantitative, phase of this mixed method explanatory sequential design study, data from 168 participants were collected from six school sites in three school districts in the Southeast using two survey instruments and a participant demographic sheet. The researcher then identified significant statistical relationships using univariate regression analysis between the independent variables of sense of belonging, achievement motivation, ethnicity, gender, and socioeconomic status with the
dependent variable of academic achievement. Additionally, structural equation modeling, a multivariate analysis, was used in the first phase to allow the researcher to consider multiple variable combinations at the same time to determine the relationship between sense of belonging, achievement motivation and academic achievement and if achievement motivation was an intervening factor on sense of belonging and academic achievement.

In the second, qualitative, phase, twelve purposefully selected students were interviewed. The themes which emerged from these interviews were “similarity to previous school”, “involvement in new school”, and “process of transition to new school”. These themes were then used to help the researcher identify contextual factors that can have an impact on a transfer student’s sense of belonging, achievement motivation and academic achievement.

Keywords: Belonging, Middle School, Goal Orientation, Achievement Motivation, Ethnicity, Achievement
DEDICATION

This work is dedicated to those who

Sacrificed that I might:

Have eternal life – Jesus Christ

Have the best quality education – my mother,

Vernell L. Murry

Have the support and encouragement to pursue this endeavor – my husband,

Derrick D. Maddox

And have the quiet time and inspiration to see this to the end – my precious daughters,

Jailyn, Joiya and Jordyn.
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This dissertation would have come to a halt without the sacrifice of time and energy by Mr. Carl Brezausek who dedicated countless hours not only helping to produce the statistical analysis but also going the extra mile to make sure I understood each part of the process so that I could interpret the data for my own use in later parts of the study. Because of his unselfish desire to see me succeed, he spent hours with me in person and via email to make sure the data were accurate and interpretable. Thank you Mr. B.

I thank the school districts, middle school principals and staff, and study participants who gave unselfishly so that I might obtain the information that I needed to conduct this study. Without the assistance of staff members at each school, I would not
have had the degree of access to the students that was needed to understand the
perspective of the transfer student.

This work was dedicated in part to my Savior, Jesus Christ, without whom I
would not have had the strength and fortitude to persist in the face of the numerous
obstacles I faced over the last two years. He opened doors that I was not even aware
existed and always surrounded me with positive support to enable me to climb every
mountain.

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and church family at 4-5 (45th Street Baptist Church) for their unending support of me
and willingness to help me keep the lives of my children as normal as possible
throughout this journey. EVERY school event and extracurricular activity had a “family”
representative present to remind my girls that they were special not only to me but to
many others as well.

My mother, Vernell L. Murry, and my father, James R. (Barbara) Reese, Sr. have
not only blessed me with life but with the belief that I can accomplish any task that I set
my mind to. They have also provided me with my own personal cheerleading team in my
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CHAPTER 1
INTRODUCTION

"No Significant Learning Occurs Without a Significant Relationship" - Dr. James Comer

Statement of the Problem

Research initiated by the Carnegie Foundation in 1989 resulted in a groundbreaking publication on middle school reform entitled *Turning Points 2000: Educating Adolescents in the 21st Century* (Jackson & Davis, 2000). In this book, the authors noted an adolescent’s need for a sense of belonging in school as a factor in increasing achievement motivation and academic achievement. They wrote, “middle school should be a place where close, trusting relationships with adults and peers create a climate for personal growth and intellectual development” (p. 37). Additionally, several empirical studies (Anderman, L., 2003; Booker, 2004; Faircloth & Hamm, 2005; Goodenow & Grady, 1993; Goodenow, 1993a; Goodenow, 1993b) have shown a sense of belonging to have a positive correlation with achievement motivation and academic achievement for adolescents.

A rapidly increasing segment of the middle school population is associated with adolescents who frequently change schools. As our society has become more mobile with about 2 million American families moving each year (U.S. Census Bureau, 2009), this has resulted in about 13% of kindergarten through 8th grade students changing schools four or more times (U.S. Government Accountability Office, 2010) within this 9-year academic period. This degree of movement justifies the terminology neighborhood
schools have adopted such as “revolving door” and “boomerang students” to describe the
degree of increasing enrollment and withdrawal at a school (Sanderson, 2004). Although
U.S. citizens moved at the lowest rate in 2008 (11.9%) than in the prior 60 years that the
U.S. Census Bureau had been tracking moving data (U.S. Census Bureau, 2010), the re-
location of a family typically necessitates a change in school by the children. This
change in a school setting for children encompasses more than simply an adjustment in
physical surroundings; it involves numerous other changes including educational re-
quirements (e.g., course and graduation requirements); behavioral expectations; teachers
and peer groups (Bartosh, 1989).

The face of America’s student population is rapidly changing. In 2000, the U.S.
Census Bureau reported that 40% of the children who were of school age were of an eth-
nic minority group (National Center for Educational Statistics). Because of the overall in-
creasing minority student population, a number of districts in suburban school regions
have experienced many new cultures in a short period of time. Specifically, Polite
(1993) explained that the migration of one of these new cultures, middle-income African
American families, from inner cities to suburban communities can be attributed to the de-
sire of African Americans to find “greater social, economic and educational opportuni-
ties” (p. 337) for their children. Polite’s qualitative interviews with 39 African American
males from a near-central-city Midwestern suburban high school to ascertain the connec-
tion between their high school experience and their post-secondary school activities ex-
amined the participants’ school to work and school to college transition. Of the 39 whom
Polite first interviewed as sophomores in high school, the young men were an average
age of 21 years at the time of the interviews and consisted of 29 graduates and 10 non-graduates.

Polite posited that in terms of the educational opportunities afforded students, suburban status usually implies “greater financial resources, more conducive learning environments, enhanced opportunities for academic success, more relevant curricula, rigorous and innovative teaching, and solid administrative support” (p. 339). Gollnick and Chin (2002) argued that affluent suburban schools are more likely to have the qualified teachers, advanced-placement courses, extracurricular activities and latest technology than schools located in rural and urban settings. However, based on his research, Polite (1993) was able to determine that once in their new communities and new schools, the African Americans males did not attain the same social and economic opportunities that their White American counterparts from the same school setting achieved later in life.

Although the ethnic population is increasing, the typical suburban school remains majority White and middle class despite efforts of court ordered rulings such as Brown v. Board of Education (1954) to end segregation of races in U.S. public schools (Feldman, 2005). In their survey of U. S. school systems across the country with a grade five through eight configuration to ascertain the types of services offered to help students who transfer to their schools, Cornille, Bayer, and Smyth (1983) discovered that some students have a more difficult time adjusting than others. Of particular interest for this study was the finding that students who are new to a school setting and are “culturally different than that of the student body [may] have greater challenges in [their] school adjustment” (Cornille et al., 1983, p. 231) than students who are not culturally different. Ford (2010) commented that the students who experience the least amount of success in school are
typically the students who are “culturally different from the dominant or mainstream group” (p. 50). Benner and Graham’s (2007) longitudinal study of 918 predominantly minority eighth grade students from 11 middle schools in metropolitan Los Angeles revealed African American male students who experienced ethnic incongruence (differences) also had a declining feeling of belonging as they transitioned from eighth grade to ninth grade.

While in 1972, 78% of the school population was White, data from the U.S. Department of Education (Planyt et al., 2009) revealed that in 2005, 45% of the school population is now culturally different. This amounts to a 23% increase of African American, Hispanic, Asian and Native American students in U.S. school population.

According to research by Cornille and colleagues (1983), the “average” new student experiences an adjustment period of 23 days in peer relations and 17 days in academics. Berndt and McCandless (2009) examined how a family’s move to a new community impacts children’s and adolescents’ academic adjustment with the children of U.S. Armed Forces parents. Their findings demonstrated that the new students showed poorer academic achievement that last throughout the first year of enrollment in their new school. Their adjustment struggles did not end after a few weeks or months in their new community because of the stress of making new friends as well as adjusting to their new teachers and peers. With the degree of difficulty that students of varying ethnicity, gender, socioeconomic status (SES), and achievement motivation are experiencing in adjusting to their new school, which tends to reflect the dominant culture, a means of assisting these students in achieving academically is greatly needed.
Ethnicity

The difficulty experienced socially and academically by students in transition is often more pronounced for students who are ethnically different from the dominant culture represented in the school (Phelan, Yu, & Davidson, 1994). Through in-depth interviews conducted with 55 ethnically and academically diverse youth in four California urban high schools over a 2-year period, Phelan and colleagues found that the characteristics of American classrooms still typically reflect the dominant culture in our society. Based on the interview data, the researchers developed a description of the pressures and problems that impact an ethnically diverse students’ ability to engage and perform to a high level in school and learning activities. The study resulted in the development of The Students’ Multiple Worlds model in which four types of minority culture students were identified who are enrolled on the campuses of the dominant culture: Type 1 students are able to exist and perform in congruent worlds with smooth transitions between their two worlds: the dominant culture and their ethnic culture. Most of these type students associate their academic achievement with their long-term success in educational goals. Type 2 students exist in different worlds with transitions between the two worlds managed. Many of these students associate their academic achievement with their long-term success in educational goals but also feel isolated or alone in classes and feel pressure to hide their ethnic self with peers. These are also students wanting to blend in an attempt to hide major parts of who they are culturally. Type 3 students exist in different worlds with difficult transitions between their two worlds. Many have difficulty understanding the material in school and are worried about making it to graduation. These students struggle to achieve. Type 4 students live in different worlds with transitions between the two
worlds resisted. These students are also worried about making it to graduation and about their future. They have an additional challenge in that they feel picked on by teachers because of their race, gender, values, beliefs or other personal attributes. Many of these students have given up academically (Phelan et al.). This researcher hopes to determine if sense of belonging is a factor that influences Type 1 and Type 2 student successes. If so, it is hoped that these findings can then be applied to Type 3 and Type 4 students to help improve their academic success as the students go through the process of transferring to affluent suburban middle schools.

Whether the students’ achievement is gauged by teacher assigned grades, standardized test scores or graduation rates, the disparity in achievement of students from different ethnic groups has always been a reality within the American educational system (Gollnick & Chin, 2002). Decisions made during the middle school years can have a lasting impact on the academic trajectory of students (Anderman, E. & Maehr, 1994). Nevertheless, the overemphasis on standardized test scores has left little attention for the affective needs of students (Osterman, 2000) during these turbulent adolescent years which can be further complicated by transferring to a new school. Over the last twenty years, a means of closing achievement gaps between White and minority has been explored extensively (Uwah, McMahon, & Furlow, 2008). Based on their study of the relationship between perceptions of school belonging, educational aspirations and academic self-efficacy with an African American sample of 40 male high school students from a large Southeastern city, Uwah and colleagues asserted that No Child Left Behind of 2001 (NCLB) with its focus on high stakes testing is causing schools to overlook other person-
al and social variables which impact student learning. These psychosocial and environmental factors should be addressed as well as academic factors.

Over 50 years after the landmark *Brown v. Board of Education* (1954), ethnic minority students (particularly African Americans and Hispanic Americans) still lag behind their White peers in academic achievement. For example, data provided by the U.S. Department of Education in 1989 reporting on reading levels for students in grade 4 and grade 8 showed that while 22% of White students were reading below grade level, by comparison 57% of African American and 51% of Hispanic Americans were reading below grade level. Also, the rate for completing high school was approximately 8% higher for European Americans than for African Americans who showed a completion rate of 83.7% in data presented in 2000 (Kaufman, Alt, & Chapman, 2001). By 2004, these statistics were not improving as the graduation rate for African Americans was reported at 45% while their White counterparts were approaching 70% (U.S. Department of Education). Finally, the most staggering discrepancy in levels of achievement was reported in 1999 on the “nation’s report card,” the National Assessment of Educational Progress (NAEP). The reading and math scores for 17-year-old African American and Hispanic students was reported as being equivalent to that of a 13-year-old White student. This statistic punctuates the achievement gap between Whites and non-Whites by revealing a full 4-year gap in academic skills. While these gaps are beginning to narrow, as reflected in the latest data published in The Nation’s Report Card for Mathematics 2009, no significant changes in the gap between White and Black or White and Hispanic students were reported for 8th grade students from 1990 to 2007. However, a slight upward trend for all students was seen from 2007 to 2009 with a 2-point increase. Nationally, when com-
pared to 2007, five states and jurisdictions (Indiana, Nevada, Vermont, West Virginia, and Wyoming) were reported to have made gains at the eighth-grade level (NCES). For Reading, no significant changes in the gap between White and Black or White and Hispanic students were reported for eighth-grade students between 1992 and 2007. On the other hand, the gap between females and males narrowed during this period. Nationally, average scores were higher in 2009 than in 2007 for most of the racial/ethnic groups, male students and public school students. Alabama was one of seven schools where Reading scores for public school students increased in 2009 compared to average scores in 2007. Finally, for Science because changes had been made to the content of the test, no comparisons to other years were available but it was reported that White students earned higher average scores than any other racial/ethnic groups and males scored higher than female students at the eighth grade level (NCES, 2009). By school location, it was reported that in eighth grade, students in the suburbs and in rural areas scored slightly higher than students in the city or in a town. Sadly, it was believed following the Brown decision over 50 years ago, those African American students, in particular, would have better quality schooling leading to higher academic achievement (Patterson, 2001).

It has been demonstrated that proximity alone does not bridge the gap between the “socially constructed boundaries” (Smith & Kozleski, 2005, p. 271) of minority students and White students. However, because the contextual factors associated with the teaching of minority students, including feeling as though they belong, have not been addressed, the promise of Brown has not been realized (Shealey, Lue, Brooks, & McCray, 2005).
Gender

In addition to differences in academic achievement and sense of belonging based on ethnicity, gender differences with relation to academic achievement have been documented for students who transition to a new school. The data reported by the U.S. Department of Education (2004), showed that boys had greater academic difficulties and were achieving at a lower level in most school subjects as indicated by test scores, grades and school dropout rates. Former school counselors, Akos and Galassi (2004a), investigated the role of gender and race in the psychosocial adjustment of sixth-grade and ninth-grade students as they transitioned to middle school and high school in a high performing Southeastern school district. By psychosocial adjustment, Akos and Galassi (2004a) meant the students’ perception of the difficulty of the transition and degree of connectedness to their new school. The researchers used the School Transition Questionnaire to determine the students’ feelings about the difficulty of the transition and sense of connectedness to the new school in addition to finding out individuals who the students found most helpful during the transition experience. Findings revealed that girls felt more connected after the transition to middle school than boys. By contrast, boys felt more connected than girls during the transition to high school. In terms of race, Latino students perceived the transition to middle school was more difficult than either Caucasian or African American students. Chung, Elias, and Schneider (1998) also conducted research with 99 early adolescents as they transitioned from elementary to middle school. The predominantly White sample of suburban students was assessed using multiple measures at the end of fifth grade and at the end of sixth grade. A significant decrease in academic achievement and increase in psychological distress for the entire sample was determined.
No significant changes in students’ self-concept, school behavior and social support were noted for either boys or girls. Only boy participants showed academic declines in the transition to middle school in this study.

Contrasting results were found by Kohlhaas, Lin, and Chu (2010) in their study of fifth graders’ ($N = 8,741$) science performance. For their study, the gender distribution was 48% male and 52% female with Whites (58%) dominating the sample. Eighteen percent of the participants were considered low-income (identified as living below the poverty line) while the other 82% were at or above the poverty line. It was found that males outperformed females in science while ethnicity and poverty had a strong association with student performance. Hirsch and Rapkin (1987) examined the psychological well-being of students during their transition to junior high with a sample consisting of 159 White (74%) and Black (26%) students transitioning from six elementary schools. The researchers found that girls transferring to the junior high experienced an increase in depression and hostility over their boy counterparts. Additional findings included girls demonstrating a significant decrease in their commitment to school following the transition to junior high.

Consequently, researchers have not been able to agree on the impact of gender on academic achievement and sense of belonging. The results of some studies have suggested that boys have greater difficulty in both areas following a transition to a new school. However, the research of others posits that girls are not only outperformed by males but also are more likely to experience depression and hostility following a transition.
Socioeconomic Status (SES)

Results similar to those obtained when studying students from varying ethnicities have been obtained in studies of students from varying socioeconomic backgrounds who transfer to new schools. A study by Felner, Primavera, and Cauce (1981) found that the association between number of moves and poor achievement level was stronger for African American and Hispanic students through the examination of the school records of 250 ninth-grade students from three Northeastern high schools. In their research, they also ascertained that students from lower-SES and belonging to a minority group had greater difficulty following a school transition than students from upper-SES backgrounds. The achievement level and overall acceptance by new peers was related to social class noting that students from lower-SES had greater difficulty adjusting to a school transfer. Similarly, Morris, Pestaner, and Nelson (1967) considered the reading and math scores of fifth-grade students \(N = 410\) from a California suburb in an ethnically homogeneous sample of Caucasian students while investigating the relation between mobility and achievement. In this study, they determined that high achieving students from upper-SES families continued to achieve at a high level following a move. By contrast, many students from lower-SES families began to decline in achievement despite having been high achievers prior to their move.

Battistich, Solomon, Kim, Watson, and Schaps (1995) examined the relationship between students’ sense of belonging and their socioeconomic standing. The researchers obtained empirical data which showed that “warm and supportive relations with teachers are particularly beneficial and motivating for low socioeconomic students” (p. 628). The results of the study showed that the effects of poverty can be diminished if the school
creates an environment with a caring community for its members. In fact these students will then accept the norms and values of the school more readily in this type of environment. The ability to have this type of impact is particularly important since it was found that the school experience is not as rewarding and pleasant for students in poorer communities as it is for students from affluent communities (Battistich et al.). Therefore, in this way the school would be able to compensate for what may be lacking outside the school for the students, particularly during “stressful circumstances” (p. 650) such as a school transfer.

Burkam, Lee, and Dwyer (2009) reviewed a dataset drawn from the Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999 (ECLS-K) sponsored by the NCES. In this longitudinal study, a nationally representative sample of children was followed from kindergarten to third grade. Measures used to uncover patterns among this population included mobility status, child and family characteristics, SES, prior achievement. The results of the study revealed that a school change is more common between school years than during school years and that by the end of third grade about 55% of kindergarteners from this sample were still in the school they began in 4-years earlier. While the researchers found that mobility is similar by gender, they also learned that Black children have the highest mobility rate of all racial/ethnic groups with only 45% of Black third graders still enrolled in their kindergarten school compared to 60% White and Asian third graders. The students found most likely to be mobile were those considered socially disadvantaged children (lower SES and Black racial group membership). This group of students changed schools more frequently, particularly during the first 2 years of their school career.
The findings from the 1998-1999 dataset used in the Burkam et al. (2009) study continued to be relevant 10-years later in 2009 when the U.S. Census Bureau reported that it is people below the poverty level who were more likely to move than those above the poverty line. Additionally, the Black population had the highest mover rate at 16.7%, followed by Hispanics, 15.8%, Asian, 13.8% and White, 10.7% (U.S. Census Bureau, 2010).

**Achievement Motivation**

Regardless of ethnicity, gender, and socioeconomic status, a student’s degree of achievement motivation has been associated with their sense of belonging (Goodenow, 1993b). Students exhibiting an increased sense of belonging have higher levels of achievement motivation in school (Goodenow). Declines in achievement motivation during the middle school years have previously been accepted as inevitable. However, E. Anderman and Maehr (1994) argued that declines in motivation during adolescence were associated with contextual and environmental factors of the school, not just pubertal changes of the adolescents.

Several prominent theories of achievement motivation including achievement theory which establishes a relationship between the personal characteristics and social background of an individual with their achievement (McClelland, 1985); attribution theory which emphasizes that a person's own perceptions of success or failure will determine the amount of effort the person will expend on that activity in the future (Weiner, 1992); and self-efficacy theory which implies that learners will be more likely to attempt, to persevere, and to be successful at tasks at which they have a sense of efficacy (Bandu-
However, these three theories of motivation do not take into account the impact of the environment on the individual. Researchers have determined that the classroom and school environments of a school stress certain factors which contribute to the motivation of adolescents (Eccles et al., 1993). Eccles and colleagues describe a developmental mismatch between the psychological needs of an early adolescent and the middle school environment. By emphasizing a goal orientation theory approach to the achievement motivation of students and its impact on sense of belonging and achievement, this researcher will take the ecological approach to achievement motivation.

Goal orientation theory reflects a student’s reasons for engaging in academic tasks (Ames, 1992). There are two primary types of goal orientation: mastery (or task) orientation and performance (or ability) orientation. Performance orientation was further subdivided following research by Elliot and Harackiewicz (1996) into performance-approach orientation and performance-avoidance orientation. Students emphasizing a mastery goal orientation will work towards mastering a task and learning for the sake of learning. These individuals want to understand a skill or lesson completely or to master a lesson (Meece, 2003). An emphasis on a performance goal orientation refers to an individual who wants to do well solely to impress others (Meece, 2003). This orientation was further separated into performance-approach orientation in which a student will learn the material and work hard, but only to impress others and performance-avoidance who work solely to avoid appearing incompetent with their peers. Because it is believed that mastery goal orientation individuals have the motivational pattern that is most likely to maintain academic behavior, the fact that most middle schools have been found to emphasize performance orientations over mastery has contributed to the decline in adolescent
achievement (Anderman, E., Maehr, & Midgley, 1999). However, this is a time in history when the need for schools to exhibit gains in student achievement from year to year is imperative based on the requirements of NCLB legislation. Additionally, achievement seems to be taken more seriously by students, teachers and parents at the middle school level because of the potential for its impact on future career paths (Anderman, E., & Maehr, 1994).

**Belongingness**

The construct of belongingness has been investigated as a means of helping students to transition into their new middle school environment. The relationship between the way students perceive their degree of belonging and its impact on their school achievement motivation and achievement has also been examined (Booker, 2004; Faircloth & Hamm, 2005; Goodenow, 1991, 1993a, 1993b; Goodenow & Grady, 1993). Booker (2004) used the cultural-ecological theory which asserts that the academic achievement of students is directly related to the interactions between the student and their social contexts, the school. This mixed methods study with 61 high school African American students revealed that sense of belonging for the survey participants (as measured by the PSSM) was influenced by “relationships with peers, teachers, and involvement in extracurricular activities” (p. 139). Faircloth and Hamm (2005), focusing on the relationship between sense of belonging with motivation and achievement, determined for a sample of high school students representing four ethnic groups that “belonging as a construct best explained the relationship between motivation and achievement” (p. 304). Goodenow and Grady (1993) had previously achieved similar results with a sample of
junior high school students representing three ethnic groups (African American, Euro-
pean American, and Hispanic American). They found that sense of belonging significant-
ly impacted achievement motivation and engaged persistent academic work. In their
study, they found that Hispanic students were less likely than White student to report that
they were academically motivated and those seventh-grade students, in particular, were
more vulnerable when their sense of belonging was interrupted or upset. Goodenow
(1991, 1993a, 1993b) conducted several studies with middle school and junior high
school populations examining the relationship between sense of belonging and measures
related to achievement motivation, student effort, and academic achievement. She
achieved results supporting the positive relationship that sense of belonging has with stu-
dents’ expectations of academic success, grade averages, and intrinsic school motivation
for a predominantly White middle school sample (Goodenow, 1991). With another pre-
dominantly White sample of middle school students, Goodenow (1993a) found that there
is a positive relationship between sense of belonging and motivation as measured by ex-
pectations for success in a particular subject. Finally, additional research support was
found showing that girls scored higher than boys in both urban and suburban settings in
their perception of sense of school belonging and that the length of time within the com-
munity was significant to belonging for the suburban population (Goodenow, 1993b).

Conversely, L. Anderman (2003) compared the impact of academic achievement,
achievement motivation and socioeconomic status on a student’s sense of belonging. An-
derman found a declining sense of belonging from spring sixth grade through spring se-
venth grade. The factors that predict school belonging were determined to be prior
school achievement, academic task values, and perceived classroom task (mastery) goal
orientation. Students who were more task (mastery) oriented reported a higher sense of belonging in this study. Additionally, students involved in school extracurricular activities were shown to have a higher sense of belonging. Last, from Anderman’s study, we learned that for minority students, the degree of racial integration in the school’s student population and the faculty of the school had a positive correlation with students’ sense of belonging.

Significance of the Study

The number of students transferring to suburban middle schools from non-feeder schools continues to increase each year. For the purposes of this study, a transfer student is defined as a student who transferred into the school district to begin his or her middle school career in sixth grade or afterwards. Often this transfer comes at an unscheduled transition time in an adolescents’ life. Because student achievement is closely monitored and is believed to reflect how well the school is serving its student population, it is incumbent upon schools to investigate a means of improving student achievement. Due to the amount of time adolescents spend in educational settings, student sense of belonging in these settings is of significant importance to the overall development of the adolescent. Investigating any deficiency in this area may assist school administrators, counselors and teachers in addressing the academic, social and emotional needs of adolescent students who transfer into affluent suburban middle schools from various other school settings. In addition to the growing transfer population, there is evidence that the positive aspects of having a sense of belonging cross ethnic and cultural differences between students (Sán-
chez, Colón, & Esparaza, 2005). Students and parents may then benefit from the efforts to address the adjustment and achievement of the transfer student.

However, there is little empirical literature addressing the relationship between a transfer student’s perception of belonging and achievement motivation with academic achievement in an affluent suburban middle school setting. As the number of students transferring to suburban school settings continues to increase, it will become increasingly important to determine how to assist these students in successfully transitioning into their new school environment. This study adds to the literature on the connection between student sense of belonging and its impact on achievement motivation and academic achievement for transfer students to affluent suburban middle schools. A contextual construct such as belonging, which can be improved in a school setting, may provide the key to a successful transition for all students. Other studies have focused on sense of belonging and academic achievement in a school setting for only African American students (Booker, 2004) or for low-achieving, urban minority students (Goodenow, 1993b). These studies have found that boys, students from lower socioeconomic status and minority students in a majority school setting experience a lower sense of belonging which often impacts their academic achievement.

After exploring the relationship between sense of belonging, achievement motivation and achievement using quantitative methods, participants selected for follow-up interviews assisted the researcher in exploring in more depth the influences of the three measures noted above on students new to affluent suburban communities. Because sense of belonging is a contextual factor that a school can develop in transfer students, it is important to determine if a strong sense of belonging would help to achieve greater
achievement for all students. If so, as a student transitions or transfers to a new school, teachers, administrators and counselors could work to increase students’ sense of belonging and thereby their level of academic achievement.

Purpose Statement

The purpose of this mixed methods sequential explanatory study was to determine how sense of belonging affects achievement motivation and academic achievement for seventh-grade and eighth-grade transfer students in affluent suburban middle schools in the Southeast. In the first phase of this study, which was quantitative based, the survey data \( N = 168 \) was used to assess the role of students’ sense of belonging as influenced by their demographic characteristics (ethnicity, gender, and SES) and students’ achievement motivation on academic achievement using univariate analysis. This was followed by a multivariate analysis using a Structural Equation Model approach to determine how these independent variables interacted together to determine students’ academic achievement. In the second phase of this study, which was qualitative based, individual interviews were conducted with survey respondents \( N = 12 \) selected using maximal variation and extreme case sampling strategies based on low and high belonging and achievement scores to explore these initial quantitative results in more depth.

Research Questions

*Phase 1: Quantitative*

The following research question was associated with phase 1 of this study:
What is the relationship between sense of belonging, achievement motivation and academic achievement for transfer students to affluent suburban middle schools in the Southeast?

Subquestions. The following subquestions were used for phase 1 of this study:

1. What is the role of student demographic characteristics (ethnicity, gender, SES) in the relationship between sense of belonging and academic achievement?

2. What is the role of achievement motivation in the relationship between sense of belonging and academic achievement?

Null hypotheses. The following null hypotheses were related to the quantitative data collection and analyses that were tested:

1. There will be no statistically significant interaction in Belonging score related to Gender for students who transfer to affluent suburban middle schools.

2. There will be no statistically significant difference in Belonging score related to Socioeconomic Status for students who transfer to affluent suburban middle schools.

3. There will be no statistically significant difference in Belonging score related to Ethnicity for students who transfer to affluent suburban middle schools.

4. There will be no statistically significant difference in Belonging score related to Motivation as measured by Mastery Goal Orientation for students who transfer to affluent suburban middle schools.

5. There will be no statistically significant interaction in Academic Achievement related to Gender for students who transfer to affluent suburban middle schools.
6. There will be no statistically significant difference in Academic Achievement related to Socioeconomic Status for students who transfer to affluent suburban middle schools.

7. There will be no statistically significant difference in Academic Achievement related to Ethnicity for students who transfer to affluent suburban middle schools.

8. There will be no statistically significant difference in Academic Achievement related to Motivation as measured by Mastery Goal Orientation for students who transfer to affluent suburban middle schools.

9. There will be no statistically significant difference in Academic Achievement related to Belonging score for students who transfer to affluent suburban middle schools.

Phase 2: Qualitative

Central question. The following question was associated with phase 2 of this study:

What factors influence academic achievement for students with low and high belonging scores who transfer to affluent middle schools in the Southeast?

Subquestions. The following subquestions were used for phase 2 of this study:

1. How do the factors identified as significant and/or nonsignificant by path analysis in phase 1 influence achievement of 7th grade and 8th grade transfer students with low and high sense of belonging scores?

2. What other factors besides these explored in phase 1 influence academic achievement of 7th grade and 8th grade transfer students?
Mixed methods. The following mixed methods question was used for this study:

How does the follow-up qualitative data analysis help explain the relationship derived from the quantitative data regarding academic achievement, sense of belonging and achievement motivation for students with low and high scores for each measure?

Theoretical Framework

The theoretical framework for this mixed methods sequential explanatory research study was based on Abraham Maslow’s theory of motivation and John Ogbu’s cultural-ecological (CE) theory. According to Maslow (1962), the need to belong, to be a part of or included in a group, is one of man’s basic needs. Maslow explained that meeting the need of belongingness is a precondition for the motivation to meet higher needs such as desire for knowledge.

The search for a sense of belonging begins at birth (Maslow, 1962). Maslow has represented his well-known hierarchy of needs as a pyramid consisting of five levels (See Figure 1). Lower level needs on the pyramid must be met before an individual can climb to the next, higher level. Along the pyramid, the needs of an individual are broken down into two distinct groups: deficiency needs and growth needs.

Deficiency needs are the lower level needs identified as physiological (hunger, thirst, etc.), safety (to feel safe, secure, out of danger), love and belonging (to affiliate with others, to be accepted and belong), and esteem (to achieve, be competent, and gain approval and recognition). Physiological needs are met when an individual’s basic bodily functions such as maintenance of homeostasis, hunger, thirst, and bodily waste removal, are taken care of. Safety needs are met when an individual feels safe from bodily
harm and has both emotional and financial security. Love and belonging needs require that an individual feel he has a place where he feels accepted and loved. Esteem needs are met when a person receives respect and a feeling of success and accomplishment from others (Maslow, 1962).

The second group of needs, growth needs, includes those identified as cognitive (to know, understand, and explore), aesthetic (symmetry, order, and beauty), and self-actualization (to find fulfillment and release one’s potential). Cognitive needs include the need for knowledge and understanding as well as the need to achieve and be recognized. Aesthetic needs are met when the surrounding of the individual are balanced and in order. Self-actualization has often been described as an individual reaching his or her fullest potential (Maslow, 1962).

It is speculated that children from affluent backgrounds typically climb to the next level on the hierarchy quickly because of the existence of economic, parental, and educational supports in place to facilitate the climb. Typically, these children do not have to worry about everyday needs as those needs are met quickly and easily. Their goals then become to strive to reach self-actualization. For others, the climb can be slow and challenging. Students coming from less than affluent backgrounds are often more concerned each day with the need for food, shelter, and the necessities of life. Because this is a daily crisis, they continue to struggle to meet the various levels of deficiency needs and are frequently unable to make their climb up the hierarchy. This is an especially difficult climb if students are also coping with transferring to a new school environment. School
Figure 1. Adapted from Maslow’s (1962) Hierarchy of Needs.
relocation can be an insecure time for a student because the surroundings are unfamiliar and former social connections have been severed (Alexander, Entwisle, & Dauber, 1994).

Ogbu’s (1988) CE theory concerning minority student performance also provides a basis for the theoretical framework of this study. Ogbu’s work provides a critical framework for understanding a portion of the students who transfer to the affluent suburban middle schools, minority students. CE theory states that “student academic achievement is a direct result of dynamic interactions occurring between individuals and their social contexts” (Booker, 2004, p. 132). The CE theory posits that the ethnic distribution within a school is important. If White students are the majority in a school population, ethnic minority adolescents feel as if there is an unequal balance of power within the school (Booker). This imbalance of power can lead to stress between the minority and the majority students leading to “a more negative view of the school community and subsequently diminish a sense of belonging for minority students” (p. 132). Studies with African American students have revealed that “the culture of the school is critical to the development of a sense of belonging and ultimately, to academic success” (Fordham & Ogbu, 1986, p. 178). The CE theory based on Ogbu’s work has been dedicated to “understanding the variability in educational performance among different ethnic minority groups” (Luciak, 2004, p. 360). This variability in academic achievement has been researched with an emphasis on ethnicity, gender, SES and the level of achievement motivation for students.

The researcher drew on the theories of Maslow (1962) and Ogbu (1988) in studying the construct of belonging and achievement motivation and its impact on academic achievement. Because Maslow theorized that the need to belonging must be met before
the motivation to strive for higher needs such as knowledge (achievement) could be explored, the researcher tested the influence of belonging on achievement motivation. It is not known if belonging directly influences academic achievement or if the relationship is intervened by achievement motivation. Therefore, achievement motivation was tested along with sense of belonging. Maslow also postulated that the progression along the hierarchy of needs varied based on the economic status of an individual, especially a child. Therefore, the researcher also tested the influence of socioeconomic status. Ogbu theorized that academic achievement was impacted by the social interaction between the individual and their social context. For this study, the social context to be tested was ethnicity and gender to determine if these two variables influence academic achievement along with achievement motivation.

Limitations

Limitations of this study include the following:

1. The schools were all located in the Southeastern region of the United States.

2. The participants in this study have been enrolled in their current school for a range of time – weeks to over 2 years.

3. Consent forms were not returned from a representative sample of the entire student population or of the school transfer population.

4. The ethnic representation in the study was not comparable; -White (43.45%), Black (43.45%), Asian (5.36%), and Hispanic (7.74%) – however, it does partially reflect the representation of the student population in the six schools involved in the study.
5. There was an overrepresentation of School Site F (45%) and an underrepresentation of School Site B (2%) in the study based on the consent form response rate.

6. The participant’s prior level of achievement was not taken into consideration when assessing their current level of academic achievement.

7. The course semester averages in the core courses – math, social studies, science, and language arts – were the only measure of achievement used in this study.

8. The gender representation in the qualitative phase was not equal, 10 females and 2 males.

9. The type of model modification during the quantitative structural equation model stage called data driven modifications often lead to a model that fits the characteristics of the specific sample data and therefore cannot be generalized to another sample or population.

10. The findings from the qualitative phase may not be representative of the whole population but can be transferrable to similar contexts.

11. The researcher may have introduced her bias in the interpretation of the results of the study as an experienced educator and as an ethnic minority herself.

Assumptions

The following five assumptions in this study are as follows:

1. The data obtained from the participating schools including student grade level, Free/Reduced Lunch status (SES), and semester averages in four core subjects were accurately reported to the researcher.
2. The scores obtained with the Psychological Sense of School Membership (PSSM) were reliable and valid.

3. The scores obtained with the Pattern of Adaptive Learning Survey (PALS) were reliable and valid.

4. The sole use of Mastery goal orientation provides an accurate measure of student achievement motivation.

5. The information obtained from the participants during their interviews was truthful.

Definition of Terms

Important terms within the study include:

*Academic Achievement* – This study defined achievement as a letter grade of A, B, or C reported in all of the four core academic courses (math, language arts, science, and social studies) as first semester averages.

*Academic Self-efficacy* - refers to a student's sense of competence and confidence in the performance of class work (Eccles & Wigfield, 2002).

*Achievement motivation* – A goal theory approach will be used for this study which reflects a student’s reasons for engaging in academic tasks (Ames, 1992).

*Adolescence* – This study defined adolescence as individuals from ages 10 years to 14 years (Manning, 1993).

*Affluent community* – a community with the school’s percentage of students receiving free and reduced lunch at 30% or less
Asian - A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam. It includes "Asian Indian," "Chinese," "Filipino," "Korean," "Japanese," "Vietnamese," and "Other Asian" (U.S. Census Bureau, 2000).

Belongingness – This term was coined by Finn (1989) and later used by Goode-now (1993b) in her research. It is defined as “the extent to which students feel personally accepted, respected, included, and supported by others in the school environment” (p. 80).

Black – A person having origins in any of the Black racial groups of Africa. It includes people who indicate their race as "Black, African Am., or Negro," or provide written entries such as African American, Afro American, Kenyan, Nigerian, or Haitian (U.S. Census Bureau, 2000).

Culture – a way of perceiving, believing, evaluating, and behaving (Goodenough, 1987).

Dominant Culture – culture represented by the majority of individuals in a setting typically influencing the language, religion, behavior, values, rituals, and social customs of the group (Gollnick & Chin, 2002).

Dummy Coding – A coding that provides one way of using categorical predictor variables in various estimation models (Schroeder, Sjoquist, & Stephan, 1986).

Ethnic – a socially defined group based on cultural criteria (Tatum, 1997); “‘Ethnicity’ is commonly used as a euphemism for ‘race’” (Helms, 1990, p.4) and is used interchangeable in this study.
Explanatory Design – A two-phase mixed methods design where the qualitative data explains or builds on the initial quantitative data (Creswell & Plano Clark, 2007).

Feeder school – An elementary or middle school whose students continue together to the next level in their education.

Free Lunch – The National School Lunch Program enables students whose family income is 130% below the federal poverty line to receive school breakfast and lunch free of charge.

Hispanic/Latino – The terms Latino and Hispanic are used interchangeably throughout this study and include for example, Mexicans, Puerto Ricans, or Cubans (U.S. Census Bureau, 2000).

Mastery Goal Orientation – Refers to an individual who wants to understand a skill or lesson completely or to master a lesson (Meece, 2003).

Middle School – A school for students in grade 6, grade 7, and grade 8.

Minority – A student differing in race or ethnic background from the majority of a student population.

Mixed Methods Research – Research that uses both quantitative and qualitative methodologies within a single study (Creswell, 2007).

Non-feeder school – An elementary or middle school that is outside of the district designated pattern of pupil movement from one level of education to the next level.

Performance Goal Orientation – Refers to an individual who wants to do well to impress others, not for himself (Meece, 2003).

Race – A socially defined group based on physical criteria such as skin color or facial features (Tatum, 1997).
Reduced Lunch - The National School Lunch Program enables students whose family income is between 130% and 185% below the federal poverty line to receive school breakfast and lunch at a reduced price.

Qualitative Research – Research conducted to learn the participants’ views on a phenomenon (Creswell & Plano Clark, 2007).

Quantitative Research – Research conducted to determine how participant data fits an existing theory (Creswell & Plano Clark, 2007).

Scheduled School Transition – The transition from elementary to middle school or middle school to high school.

Self-efficacy – This study defined self-efficacy as “beliefs in one’s capabilities to organize and execute the courses of action required to manage prospective situations” (Bandura, 1996, p.2).

Semester – One half of an academic school year.

Semester Average – This is the score given by a teacher at the conclusion of a grading period, term, or semester that indicates the degree of achievement for a student (Marzano & Association for Supervision and Curriculum Development, 2000).

Socioeconomic Status (SES) – Used by the U.S. Bureau of Census as a measure of a person’s economic condition. SES is based on the occupation, educational attainment and income of the individual. Participation in the Federal free and reduced lunch program served as a proxy for the determination of socioeconomic status.

Structural Equation Modeling (SEM) – This method of analysis requires the validating of a measurement model through confirmatory factor analysis and then fitting the structural model through path analysis with variables (Schumacker & Lomax, 1996).
Unscheduled school transition - Any school transition occurring at a time other than the scheduled transitions from elementary to middle school or middle school to high school; this type of transition can occur at the beginning of the school year or during the school year.

White – A person having origins in any of the original peoples of Europe, the Middle East, or North Africa. It includes people who indicate their race as "White" or report entries such as Irish, German, Italian, Lebanese, Near Easterner, Arab, or Polish. (U.S. Census Bureau, 2000).

Organization of Study

This study is organized into five chapters. Chapter 1 presents the introduction, significance of the study, purpose statement, research questions, theoretical framework, limitations, assumptions, and definition of terms. Chapter 2 presents a review of the literature focusing on the adolescent in transition, achievement motivation in adolescents, and school sense of belonging. Chapter 3 describes the methodology that was used in this study including the research designs, sampling procedures, data collection and analyses, legitimization, and ethical considerations. Chapter 4 presents the results of the quantitative and qualitative phases and their integration for the study. Chapter 5 provides a discussion of the findings from the quantitative and qualitative phases and their resulting meta-inferences, implications and recommendations for future research.
Summary

The Carnegie Foundation (1989) proposed the need for an adolescents’ sense of belonging in a school setting as a factor to be considered for increasing achievement motivation and academic achievement. With the increasing population of U.S. students who change schools frequently as well as the increasing number of ethnic minority students, many students are finding themselves in new school situations in suburban areas which have previously remained predominantly White and middle class. These students need a means of connecting with their new school to aid in their adjustment period, particularly if they are culturally different from the majority school population (Cornille et al., 1983; Ford, 2010). There is literature suggesting the impact sense of belonging can have in both middle school and high school settings (Booker, 2004; Faircloth & Hamm, 2005; Goodenow, 1991, 1993a, 1993b; Goodenow & Grady, 1993). However, there was a need for research with students who have transferred to affluent suburban middle schools on the impact of sense of belonging on their achievement motivation and academic achievement. The purpose of this two-phase sequential explanatory mixed methods study was to analyze the influence of sense of belonging, achievement motivation, ethnicity, gender, and SES on achievement of students who transfer to affluent suburban middle school settings.
CHAPTER 2

REVIEW OF THE LITERATURE

This review of the literature begins with an overview of the history of middle school and the adolescents who attend these schools. The impact of the transition on students into a new school setting is discussed along with the experiences for students who transfer into the school settings from a non-feeder school. Additionally, the achievement motivation and academic achievement of middle school students is addressed. Belongingness is then introduced as a construct capable of assisting in easing the transition for students into their new school setting. The impact of a sense of belonging on achievement motivation and academic achievement is reviewed, as well as how both are influenced by the school context, peers and teachers. A literature review map, provided in Appendix A, was created by the researcher to visually assist the reader in understanding the scope of the literature review.

The Adolescent Student in Transition

Middle School

By the early 1900s, American schools held an 8-4 (8 years of primary school followed by 4 years of secondary) organizational pattern for elementary-secondary education (Lounsbury, 2009; McGlasson, 1973). The country was in transition from being a rural, agricultural nation to one considered urban, industrial. During prosperous times, this new industrial age provided many employment opportunities for children ages 10
years to 15 years; however, during depression times these same children found themselves on the streets (McGlasson). Most young people were attending the elementary schools but unless they were going into a profession or business, many were then leaving school to seek employment. Educational leaders recognized the need for a school between the elementary and secondary level that “would have characteristics of vocational education, citizenship education, and concern for social problems” (McGlasson, p. 10). With this in mind, grades seven and eight were first experimentally housed in a separate building with a new kind of educational program in 1896 in Richmond, Indiana. The first “junior high school” of record is considered Indianola Junior High School in Columbus, Ohio, established in 1909 (Lounsbury).

The growth of the new junior high schools was evident by the fact that by 1960 over 76% of all schools in the country held an organizational pattern other than the original 8-4 plan. These new plans varied: 6-3-3, 6-2-4, 6-6 (McGlasson, 1973). However, these new junior highs were simply smaller versions of traditional high schools and were found not to meet the needs of adolescent students which they housed.

In 1963, the term “middle school” was first introduced at Cornell University by William Alexander. This event marked the beginning of the middle school movement (Lounsbury, 2009). In most literature, a “pure” junior high school is considered grade 7 to grade 9 and a “pure” middle school includes grade 5 or grade 6, to grade 8. The middle school has been defined as “a program of transitional education which assists boys and girls to move from elementary to secondary education with maximal success” (McGlasson, 1973, p. 28).
In contrast to the junior high schools, the middle school design was developed to include the following characteristics in an effort to meet the developmental needs of adolescents: more student-centered with an emphasis on creative exploration and more flexible scheduling. Teachers were to be organized into interdisciplinary teams and have an emphasis on the affective and cognitive development of students (Akos, 2005). A true middle school environment should not be merely a physical place but an “environment in which youth come of age, acting out new roles as maturing social beings” (Lounsbury, 2009, p. 35). Yet, E. Anderman and Maehr (1994) noted in their review of research related to social-cognitive theories of motivation that today’s “typical middle school environment is characterized by few opportunities for students to make important decisions, excessive rules and discipline, poor teacher-student relationships, homogeneous grouping by ability, and stricter grading practices than those in the elementary years” (p. 293). In fact, the level of attention and student focus needed by adolescent students is more typical of that of an elementary teacher than middle school teacher (Midgley, Feldlaufer, & Eccles, 1989). This reality results in a developmental gap between the psychological needs of an adolescent and the middle school environment that should support these needs.

Adolescence

The term adolescence was coined in the latter part of the 19th century (Demos & Demos, 1969). Changes in society during this period of American history such as compulsory education, child labor laws and juvenile delinquency brought about the need for a way of classifying individuals who were no longer considered a child but were not yet
considered adults who had the ability to do things such as “terminate schooling, work as an adult or be convicted as a criminal” (Manning, 1993, p. 5). G. Stanley Hall’s work, *Adolescence*, in 1904 marked the first published recognition of this stage of growth for an individual. Further delineation of this age group came about 30 years to 40 years ago when early adolescence, a developmental period between childhood and adolescence, first had developmental tasks described by Havinghurst (1968) and later by Thornburg (1983). According to Thornburg, who later founded the *Journal of Early Adolescence*, 10- to 14-year-olds have their own set of unique physical, psychosocial and cognitive developmental characteristics that are worthy of future study. Throughout the literature, a variety of terms such as preadolescents, emerging adolescents, early adolescents, in-between-agers, transescents, and young adolescents have been used to describe individuals from ages 9 years to 16 years (Manning). For the purpose of this study, the term adolescent refers to preadolescents, emerging adolescents, early adolescents, in-between-agers, transescents, and young adolescents.

Adolescents go through many psychological, physiological, biological, cognitive, and emotional changes with the onset of puberty (Wigfield, Lutz, & Wagner, 2005). With the exception of infancy, adolescence marks a phase of life characterized as the most rapid and diverse developmental stage of an individual’s life (Pruitt, 2000). While these changes occur in an adolescent daily, they do not occur uniformly; therefore, there is a tremendous amount of diversity within this population. An adolescents’ preoccupation with their developmental changes as well as the differences observed in rates of change can affect their attention, motivation and overall capacity to focus on school learning activities (Manning, 1993).
From a psychosocial standpoint, this time period in a young person’s life is also known as the “identity-forming years” (Manning, 1993, p. 1). Young adolescents begin to “shift their allegiance and affiliation from parents and teachers toward the peer group” (p. 18). During this stage of development, identification with peers and the need to conform to peer norms increases (Berndt, 1979). At this time in their lives, friends help young adolescents develop a sense of identity as they adjust to the pubertal changes. Developmental theorists from Erikson to Piaget have noted the two major needs of children during this time of their lives are the “need to belong and a need to discover who they are” (p. 1).

According to Erikson (1963), this time of life is a time filled with confusion, self-doubt and rebellion. Erikson postulated eight psychological stages of life, and adolescence falls into two of these stages. In the first of these, the industry vs. inferiority stage (6 years to 11 years of age), children tend to develop their sense of competence and achievement. According to Erikson, if a child experiences the loss of peer approval or identification and/or an inability to complete tasks during this stage, a sense of isolation or inadequacy can develop. During this stage of development, a child either sees himself as industrious or inferior. Erikson states that social emergence and a sense of achievement are necessary for an adolescent to advance to the next psychological stage, identity vs. role confusion. In this stage (12 years to 18 years of age), adolescents search for a new sense of self and for their own identity within their social context.

Piaget (1965) argued that children pass through four cognitive developmental stages: sensorimotor, preoperational, concrete operations, and formal operations. During the adolescent years, an individual passes from the concrete operation stage into the for-
mal operation stage. There is also a considerable amount of diversity in the rate of cognitive developmental change. Young adolescents begin to use abstract thinking skills as well as to think reflectively as they pass through these two stages (Manning, 1993). It is during this period that young adolescents “begin to develop the ability to make reasoned moral and ethical choices” (p. 27).

For children of all ages, school plays an important role in the child’s everyday life. It is second to the child’s home as the most important social setting (Blakeman, 1993). School is the main setting for connections and feelings of membership to occur for many adolescents (Booker, 2007). It is within the school setting that a child learns the values associated with their new community (Cornille et al., 1983). Therefore, at a time when adolescents are attempting to take control of their lives, a transition such as a move presents a change that is beyond the child’s control and can result in problems for adolescents (Blakeman).

*Transitioning for the Adolescent*

The numerous internal changes experienced by adolescents are further impacted by the external changes in their academic environment. Early adolescents leave the elementary school environment and enter into the middle school setting. These contextual changes require students to adjust to students from other elementary schools, new teachers, and multiple sets of behavioral expectations as a result of students having more than one teacher (Akos, 2002). Students move from an environment where their primary instruction is provided by the same individual all year to one in which instruction is delivered by as many as six or seven teachers each year.
Akos (2002), a former school counselor, conducted an analysis of data collected through a longitudinal study of fifth and sixth graders in a large, rural, Southeastern public school district to learn more about student perceptions during their transition from elementary to middle school. The study involved four phases of research. For phase 1 and phase 2, 2,331 White (59%) and Black (37%) fifth-grade elementary students completed a writing assignment to provide qualitative data about their upcoming transition. Approximately 45% of these students were listed as being on free and/or reduced lunch during their fifth-grade year. For phase 1, the fifth grade students submitted questions they had about middle school including a list of specific concerns they had about their upcoming transition, what they considered the positive aspects to be, who they would ask for help at the middle school, and their thoughts on what a new middle school student should know. For phase 2, the students completed a questionnaire to gather further information about student perspectives. For phase 3, 103 randomly chosen sixth graders from the original sample were administered a questionnaire developed based on the results on the writing assignments from phase 1 and phase 2. For phase 4, 97 of the students who had experienced success as measured by average or better grades, appropriate behavior and regular attendance were purposely sampled and administered a questionnaire repeating questions from phase 1 and phase 2 during the first 9 weeks of their sixth-grade year. Akos learned that students were concerned about rules and procedures and that this aspect was more important for the students than concerns about class scheduling. There were also concerns about homework and doing well in middle school. Also according to Akos’ research, there are equal if not more positive than negative aspects of the move to middle school from the student’s perspective. The students in Akos’ study indi-
cated that friends and teachers were a significant source of help during this transitional period.

Akos and Galassi (2004a) investigated the role of gender and race in the psychosocial adjustment of sixth-grade and ninth-grade students as they transitioned to middle school and high school in a high performing Southeastern school district. By psychosocial adjustment, Akos and Galassi meant the student’s perception of the difficulty of the transition and degree of connectedness to their new school. The sample of 173 sixth-grade students (83 boys and 86 girls) was approximately 57% Caucasian, 20% African-American, 9% Asian, 8% Latino, and 4% multiracial. The 320 ninth-grade students’ (153 boys and 161 girls) racial composition was 76% Caucasian, 10% African American, 6% Asian, 3% Latino, and 2% multiracial. Both samples had participants that did not specify their gender or their race. The researchers used the School Transition Questionnaire to determine the students’ feelings about the difficulty of the transition and sense of connectedness to the new school in addition to finding out individuals who the students found most helpful during the transition experience. Findings revealed that girls felt more connected after the transition to middle school than boys. By contrast, boys felt more connected than girls during the transition to high school. In terms of race, Latino students felt the transition to middle school was more difficult than either Caucasian or African American students. According to Akos and his colleague Galassi (2004b) the changes associated with school transitions fall into three categories: academic, social, and procedural. In the middle school environment, students are afforded more academic choices for the first time in the form of electives (Akos, 2005). In addition to elective choices which can serve as an early career decision point, “middle school requires inde-
pendent choices during class changes, negotiating multiple teachers and new peer
groups” (p. 97). While it is believed that friends can help students through major life
transitions (such as a school transition or a move), the friendships of adolescents are often
interrupted in the transition to middle school (Akos) as elementary schools are merged
and enrollment increases.

Additional concerns from parents and students experiencing a transition to middle
school and high school were regarding procedural matters related to their new school en-
vironment (Akos & Galassi, 2004b). Concerns about getting lost and getting to class on
time were expressed most frequently by the survey participants. However, students did
not indicate that they perceived the transition to middle school or high school as being
difficult. Students also reported a strong connection to their new school after the transi-
tion to middle school and high school. Neither race nor gender presented as a significant
variable in student perception of their transition or in their feelings of connectedness to
the new school.

In a study conducted by Wenz-Gross and Parker (1999) of public school students
in urban, suburban, and urban fringe communities in the Northeast, it was determined that
students had a variety of experiences as they transitioned through middle school. Data
were collected at the beginning and end of the school year to measure social support,
stress, and school liking for sixth grade students (N = 581). Multiple regression analyses
revealed that minority students and males seemed to have more diverse challenges in
their transition than non-minority and females.

A school transition typically falls into one of two categories: scheduled or un-
scheduled (Jason, 1992). A scheduled transition to middle school occurs when an entire
class of students from a feeder elementary school moves to a higher grade level at another school. The students who participated in this type of transition had a distinct advantage over students who were involved in an unscheduled transition. Scheduled transition students benefited from involvement in structured orientation programs and were afforded the benefit of an adjustment period to become familiar with their new surroundings. Students who transferred over the summer or during the middle of the year, on the other hand, were considered unscheduled transitions and typically only involve individual students. These students often transitioned to the new school without the benefit of structured orientation programs.

**Transferring and the Adolescent**

*Reasons for transfer.* In a review of literature related to the typology of major school transfers, Bayer (1982) classified additional reasons why students enter a new school into the categories of systemic relocation or individual transfers. His classification of systemic relocation would not only include scheduled transitions but also school closings and required busing to maintain the racial balance of a school. Individualistic transfers, on the other hand, involve a change in the status of the child such as moving or changing public/private education status. An individual transfer typically affects the child differently than systemic school changes. However, this type of unscheduled transition or individual transfer differs from the scheduled transitions from elementary to middle school and middle school to high school. This type of transition can have negative consequences for the student. Unlike scheduled transitions where students from a pre-
vious school move with the child, transfer students are not only adjusting to a new environment but a new peer group as well.

Cornille and colleagues (1983) surveyed U.S. schools across the country with a grade 5 through grade 8 configuration to ascertain information on how each school deals with newcomers. From the 552 surveys returned, the researchers were able to determine that the most important need for the new student was making friends and meeting individuals in their new neighborhood. They also found that being a shy student or one with poor social skills complicated the adjustment process. Additionally, they found that students from a culturally different group from the school’s majority population experienced difficulty. The reasons compiled by the researchers for transferring included wanting a fresh start, transferring from public to private school, “household considerations,” seeking a better place and school closing. “Household considerations” encompassed forced moves, obtaining their own place in lieu of sharing a residence, the formation of a new household, space considerations and cost considerations.

Warren-Sohlberg and Jason (1992) conducted a similar 2-year longitudinal study to investigate whether the reasons why a student changed to a private school impacted their academic competence, life stress, self-esteem and overall adjustment to the new school. They hypothesized that the reason for a transfer affected the student’s adjustment and how the school should help the newcomer. The study focused on third-grade, fourth-grade, and fifth-grade students who transferred to parochial elementary schools in the Chicago area. Data collection included background questionnaires for parents (N = 451) along with the administration of a Life Events Scale developed by Sandler and Block (1979) to measure “the life stress of their children” (Warren-Sohlberg & Jason, p. 79).
Student achievement test data, math and reading grades, and a self-concept scale developed by Piers-Harris (1964) to measure the child’s self-esteem were analyzed in this study. The students who changed households as a part of their transfer demonstrated poorer academic performance as well as more stressful life events. The study found that the students in the scheduled transition academically outperformed the students who experienced an unscheduled transition. The children, who moved due to “household consideration” as defined by Cornille et al. (1983), experienced a higher number of undesirable life events as well as poorer academic achievement.

*Impact on academic achievement.* Another component of the newcomer’s adjustment is in the area of academics. A positive correlation has also been found between student achievement and the length of time a student has spent in the same school (Demie, 2002; Dunn, Kadane, & Garrow, 2003; Sanderson, 2004). Demie’s research in a London inner city school examined the relationship between student mobility and educational achievement by examining empirical evidence from over 5,100 students from primary and secondary schools. In addition to student demographic information and fluency in English as a measure of academic achievement, teachers were also asked to complete questionnaires to further investigate the nature and causes of student mobility. Demie found that the students who were considered disadvantaged based on the data achieved at an even lower academic level than those not considered disadvantaged. A positive relationship between achievement and length of time a student spends in the same school was also found. Dunn et al. (2003) supported this finding in their study of eleventh-grade students in Pittsburg Public Schools when they investigated the relationship among aca-
academic achievement, student absence, and mobility. The goal of the study was to show that having an uninterrupted curriculum would have a positive impact on student academic achievement. The researchers found that student absences and mobility have a negative correlation with academic achievement as measured by standardized test scores. Their analysis of data also was able to show a pattern of harm done to students by high absences and mobility. Dunn and colleagues found that a student who changed schools at least once within a 3-year period had an equivalent effect of being absent over 14 school days in terms of the resulting achievement scores for the students. Both studies hypothesized and found support for their assumption that an uninterrupted curriculum (low absences and mobility) would have a positive relationship on a student’s academic achievement.

Sanderson’s (2004) study of transient students continued to investigate the discrepancy between transient and stable students. In this study, the standardized scores of the 5th grade students from an elementary school known to be a highly transient area outside of Philadelphia, Pennsylvania were analyzed to determine their level of achievement in comparison to that of stable students. Descriptive statistics on data consisting of state assessment data, enrollment figures including rates of student mobility, free and reduced lunch percentages, and median home prices combined to reveal a general decline in achievement associated with increased student mobility. Sanderson combined her review of student data with interviews of 11 veteran teachers to ascertain their perception of the relationship between mobile students and their achievement as measured by the state’s standardized test. Through this analysis, Sanderson surmised that the stable students with their entire career within the same school were found to be learning what the state as-
essed to a greater degree than students with increased mobility. This was due to the sta-
ble students experiencing a continuity of curriculum without the flow of learning being
interrupted by frequent moving. It was determined that mobility not only impacts the in-
dividual academic achievement of students but also the school site’s long term level of
achievement. The higher the rate of mobility within a school, the lower the academic test
scores for the entire school.

Alexander, Entwisle, and Dauber (1994) also traced school transfers of students
(N = 767) for their first 5 years within an elementary school in 20 Baltimore City public
schools. The moves reflected in their study were patterned along racial and/or ethnic, and
socioeconomic lines. The longitudinal study focused on how school transfers affect
school performance, as reflected in data obtained from school records on report card
marks, test scores, students’ retention history, and receipt of special education services.
The statistical analysis of the data indicated that school moves were commonplace for the
student population. Thirteen percent to 21% of the students moved within the district
whereas 25% left the district completely. Of the 230 students who changed schools, 53%
had only changed once within the 5-year period. The data showed that the children who
moved frequently were often performing poorly before they moved and tended to be low-
income minorities. Specifically, it was found that the more advantaged students trans-
ferred out of the system whereas the more disadvantaged students seemed to transfer into
the system. After following the students for 5 years, the researchers determined that stu-
dents who moved frequently had lower test scores, an increased risk for retention and
were more likely to be in special education. However, the results of the Baltimore City
study only provided weak support for the proposition that school moves negatively im-
impact student school performance when the student's previous school performance and the background characteristics of the student were taken into consideration. Nevertheless, it was found that moving complicates school adjustment in the early grades and slows academic progress because the change results in new teachers, new environment, and often a different academic emphasis.

Frequent changes in residence being harder on young children was supported in research conducted in an urban low-income elementary school where it was concluded that children who move among schools often experience more academic problems than students who do not change schools as often due to the disruption in academic routines (Lash & Kirkpatrick, 1990). Lash and Kirkpatrick examined how mobility impacts classroom instruction by examining enrollment data and conducting structured interviews with the 21 classroom teachers in a California urban elementary school whose students came primarily from rental housing. The student population represented in the school was 43% Black, 25% Hispanic, 18% White, and 13% Asian with well over half (62%) of the homes represented by the students qualifying for Aid for Families with Dependent Children funds. Two thirds of the student population in the school remained all year; however, one third fell into the category of a continuously changing group. In the qualitative study, the teachers were able to describe how the mobility of the students impacted their instruction and classroom management. Additionally, they were asked to describe the strategies they use for integrating their newcomers into their curriculum while maintaining continuity for the new student as well as their class. In Lash and Kirkpatrick’s study, the interviews with the teachers in the elementary school revealed that the newcomers experience
more psychological and social adjustment problems than students who change schools less frequently.

Nelson, Simoni, and Adelman (1996) also investigated the impact of a school transfer on a primarily minority sample of students through a three-year longitudinal study with 2,524 low-income Latino (68%) and African American (13%) kindergarten and first grade students. The study compared the students’ school functioning at the beginning of their academic career to school functioning following a move. The participants were from 24 elementary schools in an urban school district where 84% of the students qualified for free or reduced lunch prices. Academic and behavioral functioning data was collected by reviewing student report cards. A measure for academic performance was determined by averaging the student’s reading and mathematics grades. The student was assigned a behavior index by averaging grades for work habits and cooperation. Results of the study determined that students who did not move or who moved only once exhibited behavior rated as above average by their teachers when compared to the behavior of students who had moved two or more times.

In addition to academic and behavioral challenges for students, in an article developed for school counselors, Strother and Harvill (1986) speculated that the most difficult aspect of a move is the loss of valued peer relationships in the previous school setting. This is an especially salient point for adolescents who have an increasing need to identify with their peers and conform to the peer norms (Berndt, 1979). Berndt conducted two studies with a predominantly White sample of students from a middle- and working-class Northeastern city designed to demonstrate the changes in the degree of conformity to peer and parent expectations for students as they matriculated through
school. In the first study, students in grades three, six, nine and eleven or twelve were asked to provide responses to hypothetical situations that challenged them to perform either anti-social, prosocial or neutral behaviors. It was found that peer conformity for students peeked at sixth grade or ninth grade. In the second study, in addition to peer conformity to antisocial and prosocial behaviors, Berndt added conformity to parental expectations on prosocial and neutral behaviors. Findings from the second study found that parental conformity to both prosocial and neutral behaviors decreased as the students’ age increased. Additionally, there was a negative correlation between student conformity to peers and parents. Taken together, the findings from these two studies demonstrate the decrease of influence parents have and an increase of peer influence as students get older.

**Achievement Motivation in Adolescents**

Academic achievement declines occurring after a school transfer are thought to be partly influenced by the level of achievement motivation held by the adolescent. The dominant view of achievement motivation is that it develops from interactions between individuals in the classroom and school (Urdan & Schoenfelder, 2006). Their analysis of research on the contextual factors related to student motivation led Urdan and Schoenfelder to determine that aspects of the school environment can enhance or decrease student motivation. However, the academic and social environments of traditional junior high and middle school are at odds with the developmental changes that students are undergoing concurrent with their entry into this new environment. Therefore, achievement motivation for academic work starts to decrease during the early adolescent years (Maehr & Anderman, E., 1993).
Eccles and colleagues (1993) argued that the mismatch between the psychological needs of an adolescent and the contextual environment of a middle school is to blame for achievement motivation problems of adolescents. For their 2-year longitudinal study on the impact of changes in the school’s and classroom environment on early adolescents’ achievement related beliefs, motives, values and behaviors, Eccles and colleagues surveyed approximately 1,500 students transitioning from a sixth grade elementary school setting to a seventh grade junior high setting. They found an overall decline in academic achievement for the student, as measured by teacher assigned grades, when the sixth graders moved to a new building for seventh grade but not by those students in a K-8 school where there was no building change. This decline occurred despite the fact that all of the students’ achievement test scores remained consistent following the transition. Their work on the impact of, what they termed, the stage-environment fit on adolescents focuses on the suspected mismatch experienced by middle school students. The mismatch occurs between the performance-oriented practices of the middle school and the needs of adolescents in their social environment. They described the middle school as having a greater emphasis on teacher control and discipline at a time when adolescents seek more choice and self-management. This mismatch increases the risk of negative motivational outcomes for the students.

In an article by Ames (1992) discussing the link between a school’s environment, goals and student motivation outcomes, it was postulated that classroom structures are related to achieving different motivational goals. Ames states that in achievement goal theory which reflects a student’s reasons for engaging in academic tasks, a student falls into one of two orientations. Mastery goal orientation, also known as task goal orientation
and the more desired orientation, focuses on mastery and understanding of content by the student. This orientation focuses more on the intrinsic value of learning. Mastery oriented students are interested in mastering a specific task. They are focused on learning, self-improvement, and personal effort. By contrast, performance goal orientation, also known as ability goal orientation, focuses on one’s ability to do better than others. The most important aspect of performance goal orientation is “the public recognition that one has done better than others or [has] performed in a superior manner” (p. 262). Students oriented to a performance goal orientation avoid challenging tasks and employ strategies such as memorizing and rehearsing to achieve success. Performance oriented students are interested in demonstrating their ability relative to others. It is Ames’ belief that elements of the classroom environment can be manipulated to produce elements related to formulating the desired achievement goals.

Not only do environmental changes impact achievement motivation during the transition, but achievement goal theory, which relates to how a student defines success and their purposes for academic achievement, also indicates that the way in which a school defines learning for its students determines student achievement motivation (Midgley, 2002). While working on a yet published case study as part of a school-university collaboration to design strategies to bring about change in a large middle school’s culture, Maehr and E. Anderman (1993) learned that the type of goal orientation that a student adopts relates directly to the nature and quality of the effort the student exhibits in their work. However, a school in which the learning environment emphasizes the demonstration of student ability has less cognitive engagement and achievement mo-
tivation. Therefore, a school emphasizing learning leans towards better cognitive engagement for students and achievement motivation.

L. Anderman (2003) compared the impact of grades (measured by student grade point average), achievement motivation variables and the teacher’s promotion of mutual respect in the student’s classroom on student sense of belonging. L. Anderman’s study used data from a longitudinal study that examined instructional practices and student achievement motivation in middle schools. The predominantly White (88%) sample of 618 participants was drawn from seven public middle schools in a Southeastern state. The students completed surveys at three different periods – spring of sixth grade, fall of seventh grade and spring of seventh grade. The surveys consisted of an adapted version of the Psychological Sense of School Membership (PSSM) and the task (mastery) goal orientation scale from the Pattern of Adaptive Learning Survey (PALS). In addition to sense of school belonging and perceived classroom task (mastery) goal orientation being measured for the students, data on the students’ expectancy for academic success, academic task values, perceived teacher support for mutual respect and academic achievement was also collected. L. Anderman found a declining sense of belonging from spring sixth grade through spring seventh grade. The factors that predict school belonging were determined to be prior school achievement, academic task values, and perceived classroom task (mastery) goal orientation. Students who were more task (mastery) oriented reported a higher sense of belonging in this study. Additionally, students involved in school extracurricular activities were shown to have a higher sense of belonging. Last, the study revealed that for minority students, the degree of racial integration in the
school’s student population and the faculty of the school had a positive correlation with students’ sense of belonging.

Nelson and DeBacker (2007) investigated another potential impact on achievement motivation in their study of a predominantly White (51%) sample of middle and high school students (\(N = 253\)) from an affluent community located in a major metropolitan area. Data collected were used to determine the relationship between the perceived peer relationships and the student’s achievement motivation. The researchers used a self-report questionnaire to assess the peer classroom climate, achievement-related beliefs and values of their best friend, achievement and social goals of the students, and self-efficacy. Data analysis involved confirmatory factor analysis, descriptive statistics, and hierarchical regression analyses which revealed that peer relationship variables explained variance in achievement motivation for this sample. The analysis also revealed that middle school students had higher mean scores for mastery goals, performance-approach goals, self-efficacy, belongingness, and classmates’ involvement. According to the study, adolescents who perceived that they were both valued and respected by their school exhibited higher self-efficacy and emphasized mastery, performance-approach, intimacy as well as responsibility goals. Each of these qualities is positively associated with student achievement.

As a means of promoting this mastery goal orientation, E. Anderman and L. Anderman (1999) had previously proposed that a students’ sense of belonging in middle school and their support of social responsibility, relationship, and status goals in the school setting would explain some of the student change in achievement goal orientation between the fifth-grade and sixth-grade years. Also they hypothesized that the adoption
of responsibility goals in middle school would lead to the development of a personal mastery goal orientation. E. Anderman and L. Anderman found that boys are more likely to adopt personal performance goals than girls. Students \( N = 660 \) from one urban, non-innercity, one urban innercity, and four suburban middle schools from four ethnically and economically diverse school districts were surveyed using the PALS to measure mastery and performance goal orientations, PSSM to measure sense of school belonging, and a social responsibility goal scale. Results indicate that when students feel accepted and feel a part of their new school, they are more likely to seek personal understanding and competence in their academic work. It was believed that students who reported a sense of belonging along with goals for being responsible members of their class would then report an increased mastery goal orientation in middle school.

A study by Stevens, Hamman, and Olivarez (2007) examined the degree of influence of White middle school teachers who utilized a mastery goal orientation in their classroom and academic pressure might have on the sense of school belongingness for Hispanic students. The study sample consisted of 434 fifth-grade and sixth-grade students along with 21 teachers. Of those, 96.5% of the students described themselves as Mexican, while 85% of the teachers reported their ethnicity as White. The students were from a mid-sized West Texas district with reporting low-incomes to moderate-incomes. Instruments used in the study included a modified version of Goodenow’s (1993b) Psychological Sense of School Membership to determine school belonging and three subscales from PALS (Midgley et al., 2000) to assess perceptions of teacher mastery orientation, student mastery orientation and academic press. The results of the study indicated that the Hispanic students’ feelings of school belonging were positively influenced by
their White teachers who emphasized a mastery goal orientation and academic pressure within their classroom. Additionally, this school belonging then influenced the students’ mastery goal orientation. The results indicate that Hispanic students experience a sense of belonging similar to non-Hispanic peers when taught by predominantly White teachers. The researchers noted that the more teachers emphasized student learning (mastery) over performance (ability), the more the students reported that they felt as if they belonged in the school. This indicates that teachers who differ in ethnic background from their students may be able to positively impact their sense of belonging if a mastery goal orientation is emphasized.

Nevertheless, middle school students have been found to be more oriented to performance goals than to the more preferred mastery goals (Midgley, Anderman, E., & Hicks, 1995). However, it is the adoption of mastery goal orientations that lead to higher levels of academic efficacy (Midgley et al., 1995) and therefore, to higher academic achievement. Midgley and colleagues collected data for this study from elementary and middle school teachers and students in a blue-collar community near a major metropolitan area during the first year of a 3-year program that was designed to help improve a school’s environment by changing the policies and procedures in place to move the school from a more performance goal orientation to the preferred mastery goal orientation. Teachers (N = 158) were surveyed to determine their achievement goals for students and their perception of the school’s culture in terms of having mastery or performance goal orientation. Students completed the PALS as well as scales designed to determine their perception of the school’s culture of achievement goal orientation in terms of having mastery or performance goal orientation. From their research, it was deter-
mined that elementary teachers emphasize mastery goals through the classroom instructional practices more than middle school teachers.

In a 3-year longitudinal study conducted by E. Anderman, Maehr, and Midgley (1999), fifth-grade through seventh-grade students \((N = 278)\) who matriculated from six elementary schools in a working class large metropolitan school district to two different types of neighborhood middle schools were administered the PALS. The researchers wanted to determine if there were differing effects on the motivation beliefs of the students in their transition from elementary-level to middle-level schools. Middle school A exhibited a more performance goal orientation. Middle school B exhibited a more mastery goal orientation. These goal orientations were not only noted by the researchers but confirmed by the results of student survey results. The survey was administered on three separate occasions: spring of fifth grade, spring of sixth grade, and finally spring of seventh grade. The study sample was approximately 87% European American and 15% African American with 21% of the students receiving free or reduced-free lunches. The PALS was used to assess personal goal orientation, while perceptions of the goal structure in both math and English and perceived academic competence of the students who entered the different middle school environments was also assessed. In both samples, it was found that although all of the students left their fifth grade elementary schools with a more mastery goal orientation, their achievement motivation orientation took different paths as they entered middle school A and school B. The data indicated changes in their personal-goal orientations as well as perceived competence. Students in middle school A saw their school as more performance-goal oriented while students in middle school B saw their school overall as more mastery- and less performance-goal oriented. In at-
tempting to discover why students at middle school B were exhibiting the more preferred mastery-goal orientation, it was noted that teachers in middle school B were reporting an increased emphasis on making the academic tasks more meaningful for the students. Additionally, middle school B teachers were intentionally emphasizing a caring approach when dealing with students. While middle school B did exhibit some performance-goal orientation practices, as Ames (1992) suggested, simply moving away from performance goals alone does not improve student achievement motivation and achievement. This act must be in conjunction with an increase in emphasis on mastery goals in order to lead to improved achievement motivation and achievement. Additional findings for both groups include mastery goal orientation increasing across the 3 years from fifth grade to seventh grade, males reporting being more performance oriented than their female counterparts, and males also reporting a higher level of extrinsic goal orientation than females.

Long and colleagues (2007) further examined achievement motivation’s contribution to achievement in a 2-year, cross-sectional study of eighth-grade ($N = 255$) and ninth-grade ($N = 159$) students in a large, urban school district in the Midwest. The racial composition of the eight-grade sample was 87% African American, 10% Caucasian, and 3% Other (Hispanic, Native American, and Asian). Approximately 61% of the eighth-grade students received free or reduced lunches. The racial composition of the ninth-grade sample was 72% African American, 22% Caucasian, and 6% Other. Over 55% of the ninth-grade students received free or reduced lunches. The three motivational variables considered were self-efficacy beliefs, goal orientations, and domain interest. Of interest to this researcher is the measurement of student goal orientations using the PALS. The results of the study showed that there was a significant difference in the goal orienta-
tions and achievement based on gender for the original sample of 255 eighth-grade students. The female eighth-grade students exhibited a higher mastery goal orientation and obtained higher grade point averages.

Elliot and Harackiewicz (1996), building upon the goal orientation work of previous researchers, partitioned the performance goals, which represent more of a social comparison to others than exhibiting mastery of tasks, into two orientations: performance-approach and performance-avoidance goals. The two researchers believed that performance approach and avoidance orientations bring about two distinct forms of intrinsic motivation that distinguish an individual’s degree of intrinsic motivation better than the performance and mastery orientations. The researchers conducted two experiments with university undergraduate students. The first experiment, conducted with 84 students, was to assess the effects of performance goal on intrinsic motivation. The second experiment was conducted with 92 university undergraduates to assess the predictive use of the researchers’ proposed new goal orientation of performance-avoidance. The researchers learned that students who have a performance approach goal orientations are seeking to demonstrate competence in tasks and to outperform others, which has been associated with academic achievement. Those with performance avoidant goal orientations seek to avoid being judged incompetent therefore may avoid the learning task altogether, which has been negatively correlated to academic achievement.

School Sense of Belonging

“Students’ motivation is enhanced in schools in which they feel cared for, supported, valued, and influential – schools that they experience as communities” (Battistich
et al., 1995, p. 652). Battistich and colleagues spoke of this contextual means of improving student achievement motivation in their study of 4,515 students in four elementary schools from four different districts in the South (one school), the Southeast (one school), the Northeast (one school), and on the West Coast (three schools). They utilized questionnaires for the students and teachers to assess student sense of school community and collect demographic information. Additionally, in her extensive review on the educational research on belonging, Osterman (2000) defined the concept of belongingness as relatedness, sense of community, sense of school or classroom membership, support, and acceptance. However, it has been difficult to establish a clear-cut relationship between sense of belonging and achievement due to the many different ways researchers have measured and defined belonging and academic achievement (Booker, 2006). For example, according to Booker, belonging has been defined as “student perception of teacher warmth,” (p. 2) or “it involves the level of student classroom participation” (p. 2) or it is connected to student engagement. However, one defines belongingness, Goodenow (1991) believed that “students have difficulty sustaining academic engagement [persistence] and commitment in environments in which they do not feel personally valued and welcome” (p. 2). Steinberg (1996) conducted a longitudinal study involving 20,000 high school students which suggests that academic engagement is particularly important for minorities. The researcher collected survey data exploring the role of out-of-school factors on student achievement and the role of ethnicity, parents, peers, and culture on student attitudes and academic performance. Survey participants were selected to represent a variety of different social groups representing American adolescents. Participants included a predominantly Black inner-city school in Wisconsin, a predominantly Hispanic school in
California, a small rural school in Wisconsin, a semirural school in California and several suburban schools. While he found academic engagement to be important for minorities, others have found it important for female adolescents (Goodenow, 1993b).

A reoccurring theme with belongingness is the influence of positive interactions between students, teachers and peers in the development of a sense of belonging within the school (Goodenow, 1993a; Wentzel, 1997). In a longitudinal study by Wentzel (1997), adolescents’ perception of teacher caring in relation to the student’s motivation to achieve socially and academically in middle school was examined with 248 students who were followed from a sixth-grade to eight-grade suburban middle school in a mid-Atlantic state. Teacher caring was defined as “modeling a caring attitude, democratic communication styles, expectation of student behaviors, rule setting, and nurturance” (p. 412). A “robust” relationship between perception of teacher caring with positive prosocial and social responsibility, and achievement goals was found when the student’s previous achievement motivation and performance were taken into account. In another study, Wentzel (1998) examined the supportive relationships with parents, teachers and peers of 167 sixth-grade students from a suburban, predominantly middle class community to examine its relation to achievement motivation and academic performance. This study determined that peer support is a positive predictor of prosocial goal pursuit. Additionally, teacher support was found to be a positive predictor of social responsibility goal pursuit. Lastly, in her 1998 study, Wentzel found that parental support was a positive predictor of school related interest and goal orientation. In conclusion, Wentzel determined that academic goal orientations reflect the reasons why students try to achieve academically and found that if students perceived that they were supported by their
teachers, they were more likely to adopt goals consistent with the norms of the class. However, when students receive messages that they are not valued, their sense of relatedness suffers (Osterman, 2000).

Connell and Wellborn (1991) theorized that a supportive relationship with an adult in the school setting provides a greater effect on the students’ psychological state than the support of a parent from home. Additionally, after an extensive review of research on social-cognitive theories of motivation during adolescents, E. Anderman and Maehr (1994) concluded that a student’s overall experience in middle school is determined by what happens in the classroom, the contextual factors. Glasser (1986), author of *Control Theory in the Classroom*, posits that when students’ social and emotional needs are met within the classroom, they apply themselves more to what they are learning.

A study conducted by Goodenow (1991) examined the relationship between student sense of belonging in classes and measures related to achievement motivation, student effort, and academic achievement. Analysis of survey responses from a predominantly White convenience sample of 612 fifth-grade through eighth-grade students from middle to upper-middle class in a Northeast suburban middle school revealed sense of belonging in class to be positively related to students’ expectations of academic success, grade averages, and intrinsic interest in school work. A significant correlation was found to exist between psychological membership to school (belonging) and intrinsic value, the importance and interest that an academic subject has for a student. Additionally, sense of belonging was found to be correlated to self-efficacy, the self-perceived expectancies in reaching set goals.
It was also revealed that age was an intervening variable for students’ sense of belonging and their achievement motivation and achievement. Seventh grade students were more affected by their sense of belonging to school than were the other age groups. Essentially, Goodenow’s work established that sense of belonging predicts outcomes for variables, such as academic motivation, academic engagement, and achievement.

Goodenow (1993a) further studied the relationship between belonging, achievement motivation and academic achievement of 353 sixth-grade, seventh-grade, and eighth-grade students in a suburban New England middle school. Ninety-three percent of the students were White and the other 7% were primarily Asian Americans. The number of boys participating in the study (n = 187) was slightly higher than the number of girls (n = 166). She determined that there is a positive relationship between sense of belonging and motivation as measured by expectations for success in a particular subject. The study revealed that the older students’ sense of belonging had less of an impact on student achievement motivation than the younger students.

As a continuation of her research on the relationship between sense of belonging and achievement motivation, Goodenow (1993b) reported on the development and validation of the PSSM instrument. The instrument was designed to measure the perceived belongingness of adolescents in the school environment. The sample population used was one Northeastern suburban middle school (n = 454) and two multi-ethnic urban junior high schools (n = 301) in a medium-sized city in the same Northeastern state. The results of the study provided data on the relationship between school senses of belonging with self-reported school achievement motivation. Through this study, she found a relationship existed, to a lesser degree, with academic averages (grades) and teacher-rated ef-
fort of a student to belong. In both the urban and suburban settings, girls scored higher than boys for perceived sense of belonging. However, within the suburban population, the length of residence within the community was a significant factor in belongingness, while grade level showed no significance. Furthermore, analysis of minority status, special education and gender exhibited significance only with gender, while minority and special education status did not influence the subjective sense of belonging in the school. Goodenow’s (1993b) research showed that no relationship existed between belonging and ethnicity among both the suburban and urban populations. She postulated that this might have more to do with degree of representation of ethnicities within the school than with the student’s ethnicity itself.

In another study, Goodenow and Grady (1993) surveyed 301 students in two multiethnic urban junior high schools in a middle-sized city in the Northeast to address the relationship between perceived school belonging and friends’ values to academic motivation among urban students. The number of participants was approximately 30% of each African American, European American, and Hispanic American. Findings revealed that student sense of belonging significantly impacted achievement motivation and engaged persistent academic work. It was also found that school belonging is highly correlated with school success expected, the value placed on academic work, school achievement motivation, effort and persistence toward schooling. Specifically, Goodenow and Grady found that many urban adolescents have a low sense of school belonging and low school achievement motivation. Girls were more likely to feel as though they belonged, to feel a general sense of school achievement motivation, and to say that their friends valued school success. Hispanic students were less likely than White students to report that they
were academically motivated. Additional analysis suggested that students’ sense of belonging in school can override the influence of a student’s friendship group even when these friends place a low value on achievement. Goodenow and Grady also determined that seventh-grade students appear to be vulnerable when their sense of belonging is interrupted or upset. Through this study, Goodenow and Grady supported Maslow’s (1962) work which suggested that the need for belonging is a precondition for higher needs such as the desire to obtain knowledge.

The role of gender and sense of belonging on academic outcomes for urban Latino adolescents was examined by Sánchez et al. (2005). The researchers worked with 143 Mexican and Puerto Rican seniors from a large, urban high school to determine if sense of belonging would play a different role in academic adjustment of students based on gender. The PSSM (Goodenow, 1993b) was used to assess school sense of belonging. Additionally, grade point average (to determine academic achievement), absenteeism, motivation (expectation for success and value of school subjects), effort (frequency of completing homework and studying), educational aspirations and expectations were measured for the study. The females in the study exhibited more positive academic outcomes than the males. The grade point average, educational aspirations and expectations were higher for female students in this study. Additionally, school belonging also predicted academic outcomes such as motivation, effort and absenteeism. However, a significant difference between female and male reported sense of school belonging was not noted. Other studies have noted such a difference in the level of sense of belonging by gender (Goodenow, 1993b; Goodenow & Grady, 1993); however, those studies have been on middle school students as opposed to this sample of high school students. Sán-
chez et al. did not find that sense of belonging was a predictor of grade point average or educational expectations and aspirations but did predict total absences. Students who did not feel as if they belonged in their school missed more school than those who did feel a sense of belonging.

Booker (2004) examined the cultural and ecological influences on African American student achievement in high school using the CE theory as her theoretical framework. This theory posits that the academic achievement of students is directly related to the interactions between the student and their social contexts, the school. She argued that for African American students, the culture of the school is essential for the students’ development of a sense of belonging and thereby to their academic success.

Booker’s mixed methods study was conducted in two phases. In the first quantitative phase, 61 tenth-grade, eleventh-grade, and twelfth-grade African American students from a moderately-sized city in the Southeastern portion of the United States were administered Goodenow’s (1993b) PSSM to measure the adolescents’ perceived sense of belonging in the school environment. In the qualitative phase, 13 students were interviewed based on their PSSM Scale score and their grade point average. The results of the study revealed that sense of belonging for the survey participants was influenced by “relationships with peers, teachers, and involvement in extracurricular activities” (p. 139). Students reported through interviews however, that their academic achievement was not a factor of their relationships with peers and teachers.

Another researcher, Nichols (2006), conducted a study during the spring of 2003 with students from a new charter school in a large city in the Southwest to “examine students’ conceptions of belonging and to compare students’ and teachers’ perceptions of
student belonging” (p. 259). The school’s population consisted of 98% Hispanic students with all ($n = 150$) students either eligible for free or reduced-priced lunch. The data were collected in a 30-min interview with each student consisting of an orally administered version of the PSMM (Goodenow, 1993b). During the interview, the students were also asked to self-report their grades from their most recent report card. The final portion of the student interview involved using an open-ended response format to allow students the opportunity to define belonging in their own terms. Nichols found that when the majority of the students within a school were from an ethnic minority, their perception of belonging was greater than that of their White peers. Nichols’ work supported the idea posited by Goodenow (1993b) that sense of belonging has more to do with the ethnic make-up of the school than the ethnic status of the student itself.

Battistich et al. (1995) investigated another aspect of the importance of a student’s sense of belonging when they examined the relationship between a student’s sense of belonging and their socioeconomic standing. The researchers obtained empirical data which showed that “warm and supportive relations with teachers are particularly beneficial and motivating for low socioeconomic students” (p. 628). In the study, questionnaires were administered to 4,515 students in elementary schools from four different districts -- the South (one school), the Southeast (one school), the Northeast (one school), and the West Coast (three schools) -- to assess student sense of school community. The poverty rates of the schools (based on the free and reduced lunch percentage of the school) ranged from 2%- 95% with the median school having a 27% rate. The study sample was ethnically diverse with 48% White, 22% Black, 21% Hispanic, and 7% Asian. The results of the study showed that the effects of poverty can be diminished if the school creates an envi-
ronment with a caring community for its members. In fact these students will then accept the norms and values of the school more readily in this type of environment. The ability to have this type of impact is particularly important since it was found that the school experience is not as rewarding and pleasant for students in poorer communities as it is for students from affluent communities (Battistich et al.). Therefore, in this way the school would be able to compensate for what may be lacking outside the school for the students, particularly during “stressful circumstances” (p. 650) such as a school transfer.

Faircloth and Hamm (2005) extended the investigation of the relationship between sense of belonging relevant to motivation and achievement in their work with high school students representing four ethnic groups who attended schools in the San Francisco Bay area, California and Wisconsin. The data were collected from a larger study of ninth-grade to twelfth-grade students from seven ethnically diverse high schools. The survey participants of the larger study included African American ($n = 580$), Asian American ($n = 948$), Latino ($n = 860$), and European American ($n = 3,142$) students. The participants included a wide range of socioeconomic status within and across ethnic groups. Participants were asked to complete questionnaires to reveal information related to demographic, academic, social and extracurricular activities. Four areas of a student’s school experience were reported on in the study: “relationship with teachers, involvement with peers, engagement in school activities, and perceived ethnic-based discrimination” (Faircloth & Hamm, 2005, p. 305). Data revealed that all four areas noted above are important indicators of belonging for European American and Latino students. However, for African American and Asian-decent students, all but involvement with peers developed as a significant indicator of student belonging. Additionally, results of the
study found support for all four groups that “belonging as a construct best explained the relationship between motivation and achievement” (p. 304).

Developing positive peer relationships has been difficult for minority students to accomplish in some suburban environments. Way and Chen (2000) found in their study of Latino, African American and Asian-descent students \((N = 160)\) enrolled in an urban public school in New York City that only one third of the students from low-income families had their most supportive friends attending their school. This study was conducted with adolescents from low-income families. Way and Chen found that there were significant differences by gender and racial/ethnic minority status in the characteristics and quality of the friendships. The role and characteristics of friendships in this study for the minority population were also examined. Interestingly, Way and Chen found that the close friend of the minority students was less likely to be found within the school setting. Students are then doubly isolated when they do not have a home peer group or a school peer group both due to the move.

Clark and Ayers (1992) achieved similar results in their study with African American students in a Southeastern junior high. They studied the reciprocal nature of adolescent friendship dyads as well as gender, and racial compositions (Caucasian, African American, cross-race) for these dyads in junior high school \((N = 136)\) adolescents. Five measures were administered in two 60-min sessions to obtain data on personality, achievement, and peer relations. Several multivariate analyses of variance, MANOVA, were conducted. African American adolescents had more out of school contact with their best friends, whereas Caucasian adolescent friends had more in-school contact. The African American students were twice as likely as Caucasian students to indicate that
their best friends would be found outside of the school context. These researchers believed that this may be a result of a lack of understanding of the non-European students’ ethnicity by their school peers. This is a relevant fact because during adolescence, peers have such a greater influence on the students. If these close peer relations are not found within the school setting, this may impede the development of a sense of belonging.

In addition to having fewer close friendships within the school setting, many minority students experience a cultural contrast between home and school (Phelan, Yu, & Davidson, 1994). According to Houston (1988) who conducted an analysis of standardized test scores of nonurban schools in Pennsylvania, several discrepancies can be noted between nonurban minorities and nonurban White students. Aside from the academic discrepancies noted in achievement data between the minority (considered as Black and Hispanic for this study), Houston explored possible factors that influence the success of students. He first noted that when placed in a suburban environment, nonurban minorities are faced with an environment in which their culture, values and attitudes are completely different from their classmates and teachers. Due to this experience, “minority group students resist engagement in academic activities, attach less value to education than their White peers, and achieve academically at a lower rate than White students” (p. 13). Houston stated that the dominant culture and the minority cultures do not co-exist side by side but rather the majority culture dominates and often conflicts with the minority culture. Further research investigating the relationship between belonging and achievement motivation and academic achievement of suburban middle school students in New England (Goodenow, 1993a) has shown that when students feel that they are dif-
ferent or dissimilar from their teachers or peers, this perception negatively impacts their sense of belonging.

In a study involving 109 fourth-grade and fifth-grade students in a rural and/or suburban school district in New York, Kindermann (1993) examined the influence of peer groups on student achievement motivation by using teacher perception of how the students appeared in class and self-reported student achievement motivation. He found that peer groups have a strong socialization power within the classroom. Because children tend to associate and/or affiliate with peers who are most similar to themselves (Kindermann), ethnic minority students sometimes surround themselves with peers that have anti-academic norms which impede academic achievement (Steinberg, Dornbusch, & Brown 1992). However, Goodenow and Grady’s (1993) work suggests that a strong sense of belonging can override this negative influence. These findings provide support that students can overcome the pressure of peers who consider academic achievement as “acting White” (Ogbu, 2004).

Akos (2006) explored another avenue for influencing student belonging by examining the impact of extracurricular participation on student belonging and promotion of positive academic and psychosocial outcomes for middle school students. Using a sample of 173 sixth-grade students from a medium-sized, Southeastern school district with a racial composition of approximately 57% Caucasian, 20% African American, 9% Asian, 8% Latino, and 4% multiracial, the STQ was administered to the students at the end of the first 9 weeks. In addition to obtaining students’ grade point averages for the first 9 weeks, students were also grouped into one of three categories based on their level of extracurricular participation: no participation, limited participation, and multiple par-
The results of the study indicate that grade point average and a student’s feelings of connectedness are related to participation in extracurricular activities. Additionally, psychosocial adjustment was also moderately related to participation in extracurricular activities.

Finally, E. Anderman (2002), in an effort to determine school level variables that could influence perceived school belonging and its relationship to psychological outcomes, used data from two substudies of the Add Health to conduct two independent studies. The original data were collected from 1994 to 1996 from over 132 schools and 90,118 students with a sample representing 57.6% White, 1.5% Native American, 5.6% Asian-Pacific Islander, 15% African American, 6.3% other non-White, and 14% Hispanic from grade 7 through grade 12. The schools in the study were urban (32.6%), suburban (54.7%) and rural (12.8%) by location. Administrators from the 132 schools completed a survey to describe the characteristics of their school. Scales were developed for this study to measure perceived school belonging and self-concept. In his first study, E. Anderman hypothesized that school size, grade configuration, and urbanicity would have a relationship with a student’s perception of belonging. He found that size was unrelated, grade configuration is only weakly related to a student’s perception of belonging, and urbanicity (urban versus a suburban setting) resulted in a lower belonging score for students in urban school districts. In the second study, E. Anderman examined school belonging (at the school level and as an individual) as a predictor of psychological outcomes. He found that aggregated school belonging (at the school level) was positively related to social rejection, school problems and grade point average. This means that in a school where the majority of the students feel as if they do belong, the students who do not feel as if they
belong experience more social rejection and school problems as an individual. Individual school belonging was found to be positively related to optimism and grade point average and negatively related to depression, social rejection, and school problems. E. Anderman found that while individual differences such as gender, grade level, ethnicity and achievement were related to belonging, these factors were minimized when school factors such as aggregated school belonging were included. This indicates that school level variables, which are typically contextual in nature such as environment and climate should be examined and altered if necessary to meet the needs of its students.

Summary

Research related to adolescents, middle school, achievement motivation, and sense of belonging have been discussed in this chapter. The literature reveals adolescents are seeking to establish their competence and achieve acceptance from their peers during the middle school years. The middle school environment is not always conducive to the development of the peer relationships necessary to establish a sense of belonging for an adolescent. Research has also shown that the length of time a student has been a member of a school community also affects sense of belonging. This task is further complicated for minority groups within a majority school culture. Given the increase in students transferring to suburban school settings at a time considered to be a crossroads for adolescents, it is important to look at the factors such as sense of belonging that may contribute to the achievement motivation of these students. Sense of belonging appears to be a desired quality in school settings that has been linked to higher achievement motivation and academic achievement. Research over the last decade has successfully made the connec-
tion between belonging, achievement motivation and academic achievement. However, research is limited with regard to students whose culture is not similar to the dominant culture in affluent middle school settings. With so many associations previously determined through studies of the increased importance that sense of belonging may play in students’ development, especially during school adjustment periods, additional research to determine the impact of a transfer student’s sense of belonging on their achievement motivation and academic achievement during the adolescent years is warranted. Previous research has addressed both adolescents and those in a transition period. This study will investigate the impact of sense of belonging on achievement motivation and academic achievement as students transfer to an affluent suburban middle school.

This study contributed to closing the gap in the literature pertaining to students who transition to a new school from a non-feeder school at an unscheduled transition time. The researcher sought to determine if sense of belonging impacted a transfer student’s achievement motivation and academic achievement. Additionally, the researcher hoped to determine factors that impact the achievement motivation and academic achievement of students who transfer to affluent middle schools.
CHAPTER 3

METHODOLOGY

Mixed Methods Research

A mixed methods approach was used to answer the study research questions. Mixed methods research is defined as “a type of research design in which qualitative and quantitative approaches are used in types of questions, research methods, data collection and analysis procedures, and/or inferences” (Tashakkori & Teddlie, 2003, p. 711). In the last 20 years, mixed methods research has emerged as the “third methodological movement” (Teddlie & Tashakkori, 2003, p. 5). This research approach includes both qualitative and quantitative methods and combines them in a meaningful way. Quantitative methods of research are associated with gathering, analyzing, interpreting, and presenting the numerical data while qualitative methods are typically associated with gathering, analyzing, interpreting, and presenting narrative information from participants (Teddlie & Tashakkori, 2009). Mixed methods is a combined research approach extrapolating the needed research tools from both qualitative and quantitative research to obtain a more complete picture of the problem being addressed (Teddlie & Tashakkori).

Quantitative research is typically used within the post-positivist paradigm and it utilizes deductive reasoning to obtain the answers to research questions. The research questions are “variable-oriented research questions” (Creswell & Plano Clark, 2007, p. 180). The research process is used to test the hypotheses determined by the investigators. Numbers are the raw data that are analyzed by statistical methods, and then used to
answer the questions that are developed before the study begins. Therefore, quantitative research is known as “confirmatory research” (Teddlie & Tashakkori, 2009, p. 23) and is typically used to test theories.

Qualitative research has its origins in constructivism and employs inductive reasoning to ascertain the answers to “meaning-oriented research questions” (Creswell & Plano Clark, 2007, p. 180). The researchers explore an area of interest by obtaining narrative text data from participants that is then analyzed for re-occurring themes. The research questions being addressed by the inquirer emerge as the study takes place. Thus qualitative research is considered “exploratory research” (Teddlie & Tashakkori, 2009, p. 25) and can be used to generate theories.

While qualitative and quantitative research is used to explain and confirm theories, respectively, mixed methods research allows the researcher to accomplish both tasks by incorporating numerical and narrative data. The entire investigation is driven by the posed research questions. Therefore, the researcher is allowed to use any method that will help further answer the research questions. In mixed methods research the researcher is free to merge qualitative and quantitative datasets, connect the two, or to embed one within the other (Creswell & Plano Clark, 2007). Utilizing a mixed methods research approach increases the researcher’s confidence in the data and findings by assisting the researcher in not only discovering what happened but how it happened as well (Dunning et al., 2008; Sosulski & Lawrence, 2008).

Through the mixing or integration of the data at one or more stages of the research process, the researcher can obtain a better understanding of the research problem (Teddlie & Tashakkori, 2003). Mixed methods research seeks to combine the strengths of
both quantitative and qualitative research while reducing their individual weaknesses within a single study (Johnson & Onwuegbuzie, 2004).

Greene, Caracelli, and Graham (1989) described five different purposes for selecting mixed methods research: triangulation, complementarity, development, initiation, and expansion. The researcher is conducting this study for the purpose of complementarity. Complementarity means that the researcher is seeking to elaborate upon as well as enhance and clarify the results of one research strand with another (Greene et al.). Therefore, the quantitative results obtained from the use of the two survey instruments were combined with the participant interviews to utilize the strengths of both quantitative and qualitative research while counteracting the biases (Greene et al.). Additionally, the researcher supported the quantitative findings through interviews with participants to assist in interpreting the quantitative results that present outcomes that could be attributed to a number of outside factors not initially considered by the researcher (Sydenstricker-Neto, n.d.). The addition of qualitative data gave a voice to the study participants impossible to obtain through quantitative data alone.

Philosophical Assumptions

According to Creswell and Plano Clark (2007), there are four basic philosophical paradigms. These paradigms are post-positivism, constructivism, advocacy/participatory, and pragmatism. This study was grounded in the pragmatist philosophical paradigm. Pragmatism is a problem-centered, real-world application philosophy that emphasizes the research questions and consequences of research rather than the methods and focuses on both objective and subjective data (Creswell & Plano Clark). The worldview of pragmat-
ism “focuses on the outcome of research” (Creswell, 2007, p. 22). Pragmatists are less concerned with the method that is used for research and more concerned with the problem that is being studied by the researchers. Pragmatists believe that more than one paradigm can be used to address research questions (Creswell & Plano Clark). They are not committed to any one system or method (Creswell). Pragmatism is utilized by individuals who reject the idea that methodology must be either-or, either qualitative or quantitative (Teddlie & Tashakkori, 2009). Pragmatists search for the answers to questions that are of interest to the researcher using deductive and inductive thinking and mixing qualitative and quantitative data (Creswell & Plano Clark, 2007). According to Maxcy (2003), pragmatists use multiple methods and techniques to address the problem.

There are six philosophical assumptions that are used with regards to research paradigms: ontology, epistemology, axiology, generalizations, causal linkages, and deductive logic (Teddlie & Tashakkori, 2009). Ontology refers to the nature of the reality for the participants (Teddlie & Tashakkori). This reality can range from a single reality in which a hypothesis of the researcher is either accepted or rejected based on findings up to multiple realities that are then substantiated by quotes from participants (Creswell & Plano Clark, 2007). For this study with regards to ontology, the researcher anticipated multiple constructed realities to exist for the participants (Mertens, 2003; Teddlie & Tashakkori). These multiples realities were revealed through participants’ responses to the instruments and face-to-face interviews. Because no two people think alike, no single reality was accepted in this study. The qualitative portion of the study reflected these multiple realities through “the use of multiple quotes based on the actual words of different
individuals and presenting different perspectives from individuals” (Creswell, 2007, p. 18).

Epistemology refers to the relationship of the knower to the known (Teddlie & Tashakkori, 2009). For this study, the knower and the known were separable; however, they were not independent of each other. During the quantitative phase, the participants were independent of the researcher when completing the demographic and instrument information. However, during the qualitative phase, the known (the participant) was dependent upon the researcher to convey the participant’s perception of the phenomenon. This was accomplished through the development of an appropriate interview protocol to explore the participants’ quantitative results in more depth, the accurate transcription of their responses and the careful development of themes based on the participants’ responses.

Axiology refers to the role of values in inquiry (Teddlie & Tashakkori, 2009). For this study, the values of the researcher were important in interpreting the results of the quantitative phase to guide the preparation of the interview protocol for the qualitative phase. The researcher acknowledged biases held with regards to students transferring into affluent middle school settings. The values of the participants were shared during the in-depth interviews of phase 2. A representative sample of participants was taken to achieve responses representative of this unique student population.

Generalizations for the study were attempted to link the results of the study to “broader issues of social justice” (Teddlie & Tashakkori, 2009, p. 93). The context for the study was affluent suburban middle schools in central Alabama and the time was an academic calendar year for the participants. The causal linkage for the study was ex-
plored. However, it was difficult to establish a linkage because these types of “relation-
ships are transitory and hard to identify (Teddlie & Tashakkori, p. 93). The logic for this
research design was more inductive than deductive due to the researcher taking the find-
ings from a sample population and seeking to apply it to a general population of students
(Creswell, 2007).

Mixed Methods Research Design

To meet the study purpose, the researcher chose to use the mixed methods se-
quential explanatory design from Creswell and Plano Clark (2007) mixed methods design
typology. This design is typically implemented in two phases: the numeric data are col-
lected in phase 1, which is then followed by narrative data in phase 2 to help understand
the quantitative results in more depth (Creswell & Plano Clark, 2007). The researcher
collected and analyzed quantitative data to provide a broad picture of the statistical rela-
tionship between the dependent variable of academic achievement and the independent
variables of sense of belonging, achievement motivation, ethnicity, gender and socioeco-
nomic status. Additionally during the quantitative phase, the researcher used structural
equation modeling to examine if achievement motivation is an intervening factor between
the sense of belonging and academic achievement for students who transfer to affluent
suburban middle schools. These data were analyzed using SAS 9.3 to model the equation
relationship.

To further explain and enhance understanding the results of the quantitative anal-
ysis, participants for qualitative individual interviews were selected who could “best help
explain these findings” (Creswell & Plano Clark, p. 72). Participants who represented
each of the four ethnic groups being surveyed and who scored at extreme levels were selected to participate in the second qualitative phase. The qualitative interviews then assisted the researcher in gaining a better understanding of the factors that influence a student’s sense of belonging, achievement motivation and academic achievement. The sequence used for the study allowed the researcher to collect the quantitative data, use the results to develop an interview protocol and select the sample for qualitative follow-up, then use the qualitative findings to provide a more in depth picture of the quantitative results (Ivankova, Creswell, & Stick, 2006).

There are several factors to be considered when deciding upon the mixed methods research design to use for a study. Creswell and Plano Clark (2007) suggest that the researcher consider the problem to be studied – the design used should match the problem to be addressed, the level of expertise of the researcher in conducting a quantitative or qualitative study, the amount of time and money available to complete the study, and the intended audience of the study. Other important considerations, according to Creswell and Plano Clark, are decisions relevant to timing, weighting, and mixing, which are discussed in consecutive sections.

**Timing**

Timing, also known as implementation, refers to the time and order the quantitative and qualitative data is collected, used, interpreted and analyzed. The timing can be either concurrent or sequential. Concurrent means that the quantitative and qualitative data are collected, analyzed and interpreted at the same time, during a single phase. Sequential timing means one type of data set are collected and analyzed before the second type
begins. This sequence can be quantitative then qualitative or qualitative then quantita-
tive. In sequential explanatory design, data collection and analysis occurs over a period
of time, one phase after the other to allow the results from the first phase to be used to se-
lect participants for the second phase (Ivankova et al., 2006) and also to inform the de-
velopment of the data collection protocols. In this study, quantitative and qualitative data
collection and analysis occurred sequentially with qualitative following the quantitative.

Weighting

Weighting refers to the priority that the researcher gives to each research method,
quantitative and qualitative, in answering the research questions. Either both methods
have equal priority, equal weight, or one has priority over the other, unequal
weight. According to Morse (1991), the researcher’s decision regarding weighting is
based on the theoretical drive of the study: positivistic, naturalistic, or pragmatic. The
decision about which phase has priority depends on the interests of the researcher, the in-
tended audience and what the researcher wants to accomplish. This study focused primar-
ily on the relationship between sense of belonging and achievement motivation with aca-
demic achievement, and involved extensive quantitative data collection and analyses
therefore; the quantitative data have more weight.

Mixing

Mixing refers to how the two quantitative and qualitative data sets and methods
are related in the study. Creswell and Plano Clark (2007) provide three strategies for mix-
ing the two data sets. Merging of the data sets can occur either during the interpretation
or the analysis of the data. Embedding of the data at the design level requires the researcher to embed the data from one type into the design of the other type. Last, the mixing can occur by connecting from data analysis to data collection. This means that the results from one type of data leads to the collection and analysis of another type of data. In the sequential design, the phases are mixed when the results of the quantitative analysis guide the data collection in the qualitative phase (Ivankova et al., 2006). Additionally, the analysis from the quantitative and qualitative phases is mixed at the discussion of the quantitative and qualitative results to draw meta-inferences at the end of the study (Creswell & Plano Clark, 2007).

The quantitative and qualitative phases of this research study were connected at the intermediate stage and at the data interpretation stage to draw meta-inferences regarding factors which influence belonging and academic achievement (Ivankova et al., 2006). After the completion of the quantitative phase, the two study phases were connected through developing the qualitative research subquestions to follow-up on the quantitative results, selecting the participants for qualitative follow-up interviews, and developing the interview questions. Without mixing the researcher would simply end up with parallel studies that utilized different methods (Teddle & Tashakkori, 2009). The desire of a mixed methods researcher is to mix or combine the “quantitative and qualitative research techniques, methods, approaches, or concepts into a single study” (Yin, 2006, p. 41). The idea behind utilizing multiple techniques is to end up with evidence that converges to answer the research questions. The researcher does not want separate studies that are synthesized at the end.
Following a statistical analysis of the quantitative data including the results of two survey instruments and demographic information, the data was interpreted to determine the participants to be selected for the qualitative phase of the study. Twelve students from the original sample of survey respondents were selected for interviews. Students selected included four White students representing high and low academic achievement levels with high and low sense of belonging; four African American students representing high and low academic achievement levels with high and low sense of belonging; two Hispanic students representing high and low academic achievement levels with either a high or low sense of belonging; and two Asian students representing high and low academic achievement levels with either a high or low sense of belonging.

Mixing and integration occurred at the participant selection level because the qualitative participants came from the extreme cases considered from the analysis of the first set of data. These participants represented a varied group of students from different ethnic backgrounds that have high and low sense of belonging scores and high and low levels of academic achievement. The results from the quantitative phase were also used in the development of the interview questions for the qualitative phase of the study to determine which areas needed to be explored in more depth. Both methods were used to “examine the relationship between the same dependent variable and associated independent variables” (Yin, 2006, p. 45). Therefore, for this study both methods examined academic achievement (dependent variable) with sense of belonging and perception of achievement motivation (independent variables). Therefore, as Yin suggested, there was a consistent unit of analysis within the study. The results of the quantitative and qualitative strands were analyzed sequentially to make inferences and draw conclusions in an ef-
fort to answer each of the quantitative, qualitative and mixed methods research questions for this study.

These procedural aspects are important when selecting a mixed method design to enable the researcher to select the single design that best matches his/her research problem. According to Creswell and Plano Clark (2007), selecting the proper mixed method design assists the researcher in best “framework and logic to guide the implementation of the research methods” (p. 79).

Yin (2006) states that the researcher should pay particular attention to integration of the methods within a single study in the following five areas: research questions, units of analysis, samples for study, instrumentation and data collection, and analytic strategies. The research questions should address some aspect of both process questions (usually associated with qualitative methods) and outcome questions (usually associated with quantitative methods). The unit of analysis for each method must be consistent or the researcher would be unable to integrate the findings of each methods. The samples for the study should be nested one within the other. According to Yin, this nesting can occur in either direction. The instrumentation used for data collection should have variables that complement each other. It is preferable to have items that overlap in each method as well as items that are non-overlapping. Last, the researcher may be unable to merge analytic strategies, however; Yin recommends carrying out “counterpart analyses” (p. 45). By carrying out more than one analytic strategy, the researcher is able to lend support to the results of the study using two different methods.
Visual Diagram

The visual diagram of the mixed methods procedures for this study is provided in Figure 2. Using the accepted notation system (Morse, 1991), the visual diagram depicts the timing, weighting and mixing procedures in the study. Weighting is represented with all capital letters, QUANTITATIVE, with all lower case letters being used for the strand with less priority, qualitative. The arrows represent the sequence in which the strands were implemented. The oval shapes represent the phases in which the two strands were connected and integrated (Ivankova et al., 2006).

Advantages and Disadvantages of Mixed Methods Design

The advantages of using the sequential explanatory mixed methods design included implementing the study in two distinct and separate phases. This allowed a single researcher to conduct the study. However, due to the phases being conducted sequentially, additional time was necessary for the researcher to collect and analyze the data (Creswell & Plano Clark, 2007). Importantly, this mixed methods design allowed the researcher the opportunity to explore the problem from two approaches and obtain the overall patterns and trends in the data, as well as get an in-depth understanding of these trends.

The researcher was familiar with mixed methods methodology due to the courses taken at the University of Alabama at Birmingham. Courses in quantitative, qualitative, and mixed methods designs were taken to prepare the researcher to complete this study. Quantitative research courses prepared the researcher to analyze the relationship between
## Phase

### QUANTITATIVE

**Data Collection**

- Psychological Sense of School Membership Scale; Patterns of Adaptive Learning Survey; Demographic Sheet

**Procedures**

- Internal Consistency
- Reliability
- Descriptive Statistics
- Structural Equation Modeling

**Product**

- Numeric Data
- $N = 168$

---

**Data Analysis**

- SPSS v.17
- SAS v.9.3
- Maximal variation sampling; Extreme case selection
- Developing interview questions

**Sample Selection**

- Interview Protocol Development
- Developing interview questions

**Qualitative**

**Data Collection**

- In depth, individual face to face interviews possible follow-up interviews

**Data Analysis**

- Coding and thematic analysis

**Interpretation of Quantitative and qualitative results**

- Interpretation and Explanation of the Quantitative and Qualitative results

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Figure 2. Visual diagram for sequential explanatory design. Adapted from Ivankova, N., Creswell, J., & Stick, S., 2006.
the explored dependent and independent variables, as well as to select a representative sample for the qualitative interviews. Skills needed for coding and theme analysis were acquired through qualitative coursework. Mixed methods courses taken by the researcher emphasized the mixing and integration of the research findings.

Population and Sample

Transfer students from six affluent suburban middle schools in the central Alabama region were recruited for participation in this research study. These schools were selected because the locations in which the districts lie are considered suburban areas within the central Alabama region. This study used the percentage of students participating in the Federal free and reduced lunch program as a proxy for socioeconomic status. School sites were selected based on the reported 2008-2009 percentage of the students receiving free and reduced lunch. Inclusion criteria required that this percentage be 30% or less indicating a more affluent student population. Additionally, although median income was not used as selection criteria for school sites, as a point of reference for the reader, the median income for Alabama in 2008 was $42,586 and nationally was $52,029 (U.S. Census, 2009). Nine area sites within driving distance to the researcher were selected which met the above criteria however, the researcher was only granted permission to conduct research in six of the sites by district representatives. See Table 1 for demographic information about the six sites.

According to the Alabama State Department of Education website, school site A had a free and reduced lunch percentage of 16.38%. The ethnic composition of school site A in 2009-2010, the data collection period for the study, was 69.96% White, 20.14%
Black, 4.10% Hispanic, and 5.35% Asian. School site A is located in the eastern-most section of a city with approximately 62,742 residents with a median income of $75,365 (U.S. Census, 2000). School site B had a free and reduced lunch rate of 14.55%. The ethnic composition of school site B was 80.97% White, 12.08% Black, 4.17% Hispanic, and 1.39% Asian. School site B is located in a city with approximately 10,296 residents with a median income of $66,250 for a family (U.S. Census, 2000). School site C has a free and reduced lunch rate of 29.91%. The ethnic composition of school site C was 55.97% White, 32.34% Black, 7.92% Hispanic, and 2.99% Asian. School site C is located in a city with approximately 25,043 residents with a median income of $70,256 for a family (U.S. Census, 2000). School site D had a free and reduced lunch rate of 8.00%. The ethnic composition of school site D was 84.07% White, 7.35% Black, 3.84% Hispanic, and 4.08% Asian. School site D is located in a city with approximately 14,369 residents with a median income of $79,794 for a family, according to the 2000 U.S. Census data. School site E had a free and reduced lunch rate of 18.38%. The ethnic composition of school site E was 69.98% White, 19.75% Black, 6.12% Hispanic, and 4.16% Asian. School site E is located in the northern-most section of a city with approximately 62,742 residents with a median income of $75,365 (U.S. Census, 2000). Finally, school site F had a free and reduced lunch rate of 15.56%. The ethnic composition of school site F was 59.26% White, 27.64% Black, 3.98% Hispanic, and 9.02% Asian. School site F is located in the southern-most section of a city with approximately 62,742 residents with a median income of $75,365 (U.S. Census, 2000).
Table 1

Demographic Information by Site

<table>
<thead>
<tr>
<th>Sites</th>
<th>Free/Reduced Lunch</th>
<th>Ethnic Composition</th>
<th>Location of School Site</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>White</td>
<td>Black</td>
</tr>
<tr>
<td>A</td>
<td>16.38%</td>
<td>69.96%</td>
<td>20.14%</td>
</tr>
<tr>
<td>B</td>
<td>14.55%</td>
<td>80.97%</td>
<td>12.08%</td>
</tr>
<tr>
<td>C</td>
<td>29.91%</td>
<td>55.97%</td>
<td>32.34%</td>
</tr>
<tr>
<td>D</td>
<td>8.00%</td>
<td>84.07%</td>
<td>7.35%</td>
</tr>
<tr>
<td>E</td>
<td>18.38%</td>
<td>69.98%</td>
<td>19.75%</td>
</tr>
<tr>
<td>F</td>
<td>15.56%</td>
<td>59.26%</td>
<td>27.64%</td>
</tr>
</tbody>
</table>

The ethnic and gender make-up of the teacher faculty for each school site is represented in Table 2. Each of the affluent suburban middle school sites selected for this study has a predominantly White instructional staff ranging from 83% to 92%. Minimal minority representation is reflected for Black Females, Black Males, Asian Females (one school only) and Hispanic Females (one school only).

Table 2

Faculty Demographic Information by Site

<table>
<thead>
<tr>
<th>Sites</th>
<th>No. of Faculty Members Reported</th>
<th>White Female</th>
<th>White Male</th>
<th>Black Female</th>
<th>Black Male</th>
<th>Asian Female</th>
<th>Hispanic Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>77</td>
<td>65%</td>
<td>27%</td>
<td>8%</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>B</td>
<td>40</td>
<td>73%</td>
<td>25%</td>
<td>2%</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>C</td>
<td>64</td>
<td>72%</td>
<td>11%</td>
<td>9%</td>
<td>5%</td>
<td>--</td>
<td>3%</td>
</tr>
<tr>
<td>D</td>
<td>64</td>
<td>70%</td>
<td>26%</td>
<td>2%</td>
<td>--</td>
<td>2%</td>
<td>--</td>
</tr>
<tr>
<td>E</td>
<td>59</td>
<td>81%</td>
<td>17%</td>
<td>--</td>
<td>2%</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>F</td>
<td>78</td>
<td>62%</td>
<td>28%</td>
<td>9%</td>
<td>1%</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>
The criteria for participant selection and recruiting required the student to be a seventh-grade and eighth-grade transfer student to an affluent suburban middle school. Sixth grade students who are a part of the traditional middle school setting were excluded from this study because all sixth grade students are considered to be in transition (Akos, 2005; Jason, 1992), whether scheduled or unscheduled, as they enter their new middle school setting. Increased emphasis is placed on assisting all sixth grade students with their adjustment to middle school, both those entering from feeder schools and those transferring in from outside the district, through extensive orientation programs (Jason). A transfer student was defined as a student who transferred into the school district to begin their middle school career in sixth grade or afterwards. Approximately 500 students in grade 7 and grade 8 from six middle schools were asked to participate. Student lists at each school were generated by the administrators and/or registrars of students who fit the above criteria. The lists were then provided to the researcher to allow a recruitment letter and letter of consent and assent to be forwarded to the students’ parent/guardian via the U.S. Postal Service. The letter of consent/assent for students’ parents to review and sign was to be returned in a self-addressed stamped envelope provided by the researcher. A letter of consent/assent in Spanish was provided for students who indicated Spanish as their home language in school documents. Students whose parents provided consent for participation were surveyed in May 2010 by the researcher during a non-academic time determined by the school administrator.

The researcher desired a minimum sample size for the quantitative phase of 160 students. The sample size was based on the work of Cohen (1988), which suggests that given the choices of .1, .3, and .5 for small, medium, and large effect sizes to be calcu-
lated as path coefficients for a planned study, a sample size of 160 participants is needed to obtain a medium effect size of .3 which means the researcher will correctly reject the null hypothesis correctly 97% of the time in the study. The final sample size for this study was 168 students. The sample size for the qualitative phase was 12 students selected from the students who completed the questionnaires and based on their responses from the quantitative phase. These students were contacted by the researcher at this intermediate stage of the study in July 2010 to solicit their participation in the second phase of the study. Each student was interviewed by the researcher in an agreed upon location using an interview protocol that was developed after analyzing the initial quantitative data to help explore the quantitative results in more depth.

Data Collection

In this study, more than one method of data collection was used. This is referred to as inter method mixing (Johnson & Turner, 2003). By utilizing both quantitative and qualitative methods of data collection in this single study, it was hoped to obtain a “more accurate and complete depiction of the phenomenon under investigation” (p. 299).

The researcher anticipated the data collection and analysis process would take seven months. This time was used to administer the instruments, analyze the results, select interview participants and conduct and analyze the qualitative interviews.

Phase 1: Quantitative

For the quantitative phase, student lists were generated by the administrators and/or registrars of students who fit the study criteria at each school. The lists were then
provided to the researcher to allow a recruitment letter and a letter of consent and assent to the students’ parent or guardian to be forwarded to the potential participants. The informed consent letter explained the purpose, risks, benefits, alternatives, confidentiality, withdrawal procedures, cost, payment, legal rights, and questions. Students whose parents provided consent for participation were surveyed in May 2010 by the researcher during a nonacademic time determined by each school administrator. On the survey day mutually agreed upon by the researcher and the school administrator, students were asked to report to an area designated by the building level administrators for the researcher’s data collection during a non-academic period. This non-academic period was an elective period for some participants and Physical Education period for other participants. Upon entering, participants received three documents with their identification code placed at the top of each document. Participants were first asked to complete a Participant Demographic Sheet (see Appendix F). Following the completion of the Participant Demographic Sheet, the participants were asked to turn their attention to the PSSM (Goodenow, 1993b) (See Appendix H). The researcher reviewed the sample item with the participants to ensure they understood how to respond appropriately to a Likert scale statement. Each instrument item was then read twice to the participants in order to ensure that language was not a barrier for participation as they were allowed ample time to select their response for each item. Finally, the participants turned their attention to the final document, the PALS (Midgley et al., 2000) (See Appendix J). Again, the researcher reviewed the sample item for the participants before reading each instrument item twice. The responses for each instrument were collected on a pre-printed, typed document using a pencil/pen to respond to each question. The students were asked to respond to each question on a 5-point Li-
A higher score on the scale would indicate a higher level of the construct being measured by the instrument.

*Psychological sense of school membership scale.* To collect data on sense of belonging, permission was obtained from Dr. Carol Goodenow (see Appendix G) to use the PSSM Scale (Goodenow, 1993b) which measures a student’s sense of belonging in a school. The answer choices for the PSSM ranged from 1 (*not at all true*) to 5 (*very true*) with the responses to the 18 items being averaged to produce a scale score. Sample items include “It is hard for people like me to be accepted here” and “There’s at least one teacher or adult in this school I can talk to if I have a problem.” The mean PSSM score for a participant could range from 1 to 5. A higher mean score indicated a greater sense of belonging by the participant at the school. The summative score on the PSSM can range from 18 to 90 with a higher score indicating a greater sense of belonging in the school environment.

During the initial instrument development for Goodenow’s PSSM was administered to one suburban middle school which was predominantly White and middle class and two multi-ethnic urban junior high schools reporting equal numbers of African American, Hispanic and White students. The income within the location of the two schools was in the lowest range for the state. The final 18-item scale was then administered to the suburban middle school again. The reliability (Cronbach’s alpha) for the suburban students was reported as .884 (Goodenow). In the urban setting, the reliability was reported as .803 for the English version and .701 for the Spanish version. Goodenow (1993b) utilized “contrasted groups validation procedures” (p. 85) to establish construct
validity for the 18-item PSSM. Predictors such as suburban students reporting a higher sense of school membership than urban students, newcomers to the suburban (and urban) community reporting a lower PSSM score than longer residents, and suburban (and urban) boys’ PSSM scores being lower than girls were used. Several other predictors were hypothesized. Although some of the predictors did not gain support from the results of numerous one-, two-, and three-way ANOVA, in general the results supported the construct validity of the scale.

L. Anderman (2003) adapted the PSSM to use with a middle school population drawn from a larger, longitudinal research project exploring the relationship between teacher instructional practices and students’ achievement motivation. The sample consisted of 618 students with the majority (88%) being White. The data were collected in two waves; however, the waves were positively correlated ($r=.587$). She reported reliability coefficients of .80 and .81 for the five-item and eight-item adaptations of Goode-now’s (1993b) PSSM.

The internal consistency reliability achieved for this sample of participants with the PSSM (Cronbach’s alpha) was reported at .905. The benchmark for internal consistency reliability, for a low stakes instrument such as the PSSM and the PALS, is .700 (Nunnally & Bernstein, 1994).

*Pattern of adaptive learning survey.* The level of achievement motivation of students was measured using 14 items related to mastery goal orientation, performance-approach, and performance-avoidance goals adapted from the Patterns of Adaptive Learning Survey (PALS; Midgley et al., 2000). The answer choices for the PALS ranged
from 1 (not at all true) to 5 (very true) with the responses to the three subscales--Mastery Goal Orientation, Performance Approach Goal Orientation, and Performance Avoidance Goal Orientation--being averaged independently to provide three subscale scores. Sample items include “One of my goals is to master a lot of new skills each year” and “One of my goals is to look smart in comparison to the other students in my class.” For each subscale, a higher mean score indicates a stronger propensity towards that orientation. The mastery goal orientation score was used in the data analysis phase to represent achievement motivation, termed Motivation, for seventh-grade and eighth-grade students transferring to an affluent middle school. The mastery goal orientation subscale score can range from 1 to 5 with a higher score indicating a stronger mastery goal orientation. Extant literature indicates that Mastery goal orientation is the preferred orientation (Ames, 1992; Midgley et al., 1995) leading to higher academic achievement. Permission (see Appendix I) was also obtained to use PALS (Midgley et al., 2000) from two of the original developers, Avi Kaplan and Michael Middleton.

The PALS was “developed to assess a trichotomous achievement goal structure, which included the following subscales: Task (Mastery) Goal Orientation, Performance-Approach Goal Orientation, and Performance-Avoid Goal Orientation” (Ross et al., 2002, p. 483). The instrument measures student academic goals, is grounded in the achievement goal orientation work of Dweck and Leggett (1988) and was originally validated with a middle school sample. Ross and colleagues sought to validate the PALS for fourth grade and college students in their study with 378 elementary students in a large urban area and 184 college students in Southeastern United States. The task (mastery) goal orientation, performance-approach orientation, and performance-avoidance orientation
scales measures how much a respondent focuses on the task because of interest or to achieve competence; focuses on demonstrating competence, particularly when compared to others; and seeks to avoid looking incompetent when compared to other students, respectively (Ross, Blackburn, & Forbes, 2005). Students with “learning, task, or mastery achievement goal orientations” (Ross et al., 2002, p. 483) seem to be motivated to learn because they want to understand the material presented. By contrast, students with performance goal orientations are motivated to outperform others and demonstrate their ability. Performance goals are further classified as performance-approach and performance-avoidance. Students with a performance-approach goal orientation are motivated to appear competent and to outperform their peers. Students with a performance-avoidance goal orientation are motivated to avoid looking dumb to their peers at all costs even if it means avoiding the task altogether (Ross et al.).

Ross et al. (2002) provided statistical evidence to support the reliability and validity of the inferences drawn from the different achievement goal orientation scales used with students from the fourth-grade and college level. The researchers computed Cronbach’s alphas and used confirmatory factor analysis to examine the correlations between the achievement goal orientation scales of 12 different studies on students from second grade through college. In reviewing the 12 studies, the authors determined that task (mastery) and performance-approach goals were positively correlated. It was further determined that task (mastery) goals and performance-avoidance goals were negatively correlated. The correlation between performance-approach and performance-avoidance goals was found to be positive. Specifically, one study of seventh-grade students (Midgley & Urdan, 2001) revealed a positive correlation of .07 between task (mastery) goals and
performance-approach goals; a negative correlation of -.05 for task (mastery) goals and performance-avoidance goals; and a positive correlation of .59 ($p<.01$) for performance-approach and performance-avoidance goals using PALS. The PALS was validated using five waves of students in grade 5 through grade 9, the internal consistency of the three measures of the PALS ranged from .75 to .86 (Middleton & Midgley, 1997).

The internal consistency reliability achieved for this sample of participants with the PALS was reported at .868 for mastery goal orientation, .883 for Performance-approach and .681 for Performance-avoidance. The low reliability for Performance-avoidance is thought to be due to the lower sample size. Due to the positive correlation between mastery goal orientation and performance-approach orientation (Midgley & Urdan, 2001) and the low reliability for the performance-avoidance orientation results, the researcher determined that mastery goal orientation would be used as the measure of Motivation for the study. Additional, extant literature indicates that mastery goal orientation is the preferred orientation (Ames, 1992; Midgley et al., 1995) leading to higher academic achievement.

**Academic achievement.** Academic achievement data, measured by the student’s semester percentile average in the four core academic courses (math, language arts, science and social studies) and ethnicity were collected from student cumulative files. The semester percentile averages for each course were converted to $z$-scores to standardize the scores for data analysis. A $z$-score is a standardized score indicating the standard deviation the score is away from the mean score of zero (Healey, 2005). $Z$-scores are useful because they give the context of a number, in this case the context for each numer-
ical grade. The z-score is calculated by taking the score itself (numerical average), subtracting the mean then dividing this difference by the standard deviation (Healey, 2005). To obtain a single composite score to represent Achievement, the four z-scores were averaged for each participant and converted to a Thorndike score by adding 50 to each averaged z-score. This conversion was performed to move the researcher and reader away from the standard A, B, C, D, and F grade interpretation. The Thorndike score sets the average student’s Achievement score to 50 with a standard deviation of 10 (Thorndike, 2005).

Participant demographic information. The collection of a participant demographic information sheet provided self-reported information on school history, socioeconomic status (determined by whether or not the student receives free, reduced or full price lunch), and gender. In addition, personal information such as name, gender, address, and age, contact information for the participant, and a brief school history requesting previous school name(s) from Kindergarten through sixth grade were collected. Participants were also asked if they participated in honors, advanced or enrichment classes, who they lived with and whether they received free, reduced or full price school lunch as a measure of socioeconomic status. A description of the variables used for data collection is presented in Table 3.

The dependent and independent variables data were analyzed using SAS v9.3 to model the equation relationship. The relationship between belonging, achievement motivation and academic achievement was based on the extant literature (e.g., Goodenow, 1993b, Nichols, 2006), which suggests that achievement motivation and academic
Table 3

*Description of Variables Analyzed*

<table>
<thead>
<tr>
<th>Construct</th>
<th>Instrument</th>
<th>Indicator</th>
<th>Higher scores indicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belonging</td>
<td>Psychological Sense of School Membership (PSSM)</td>
<td>Sense of belonging derived from the mean score from 18-item instrument</td>
<td>Higher sense of belonging</td>
</tr>
<tr>
<td>Motivation</td>
<td>Patterns of Adaptive Learning Scale (PALS)</td>
<td>Mastery goal orientation obtained by summation of item responses from 5-item sub-scale</td>
<td>Higher achievement motivation</td>
</tr>
<tr>
<td>Academic Achievement</td>
<td>Numerical semester average from four core academic subjects from school records</td>
<td>Achievement calculated by converting all four scores to z scores to create equal weighting, summing all 4 scores then converting to a Thorndike score</td>
<td>Higher academic achievement</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Dummy coding using White as referent</td>
<td>White, Black, Asian, Hispanic</td>
<td></td>
</tr>
<tr>
<td>Socioeconomic Status</td>
<td>Dummy coding using Paid as referent</td>
<td>Paid Lunch, Free Lunch, Reduced Lunch</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>Female as referent</td>
<td>Female, Male</td>
<td></td>
</tr>
</tbody>
</table>

Achievement is positively impacted by sense of belonging. Ethnicity, gender and socioeconomic status were included as demographic characteristics.
Phase 2: Qualitative

For this study, students were selected from four ethnic groups: White, Black, Hispanic and Asian. Four students from each White and Black ethnicities and two students each from Hispanic and Asian ethnicities were selected. The four to two ratio of White/Black and Hispanic/Asian ethnicities represents their degree of representation at each school site. Extreme case selection focuses on cases that are rich in information because they are unusual or special in some way (Creswell, 2005). In this portion of the sampling process, participants with high and low belonging and high and low academic achievement scores were selected. In chapter 4, a more detailed description of the sampling of qualitative phase participants based on the quantitative phase results are provided. The students selected for interviews varied based on their ethnicity, academic achievement level and sense of belonging score. Figure 3 depicts the Qualitative Phase Sampling Strategy used to select participants for phase 2.

Of those who complete the survey instruments, 12 students selected through the use of maximal variation and extreme case sampling strategies were asked to participate in a 60 min face-to-face interview to discuss in more depth factors that influence their academic achievement and to follow up on quantitative results. This is a purposeful sampling strategy designed to select individuals who differ by a determined characteristic (Creswell, 2005). Using this technique required the researcher to select participants that had varying combinations of demographic information including free, reduced, and paid lunch status from both genders in an effort to get a more diverse perspective on the research problem (Creswell).
As a result of this procedure, the ethnicity, sense of belonging and academic achievement representation followed the qualitative phase sampling strategy depicted earlier. The 12 students selected for interviews were disproportionately represented by females and interview participants who were in seventh grade at the time of the study. Additionally, only five interview participants received free lunch while the other seven paid for their lunch.

The qualitative data collection utilized an interview script that was generated following the analysis of the quantitative data. An open-ended semi-structured interviewing approach was used that included: an exact wording and sequence of questions determined in advance, all participants being asked the same basic questions in the same order, and questions asked being worded in an open-ended format (Teddlie & Tashakkori, 2009).

Figure 3. Qualitative Phase Sampling strategy.
An Institutional Review Board amendment was submitted for approval of the interview script prior to the qualitative data collection.

The initial interviews with the 12 selected participants were conducted over a 2-week period in locations determined by each participant. Initial interviews lasted a total of 176 min, approximately 3 hr. The interview duration lasted from 8 min 38 sec to 26 min 19 sec with the average interview duration being 14 min 40 sec.

Follow-up interviews were conducted with 6 of the 12 participants. After transcribing the interview tapes, the researcher noted discrepancies between these six participants’ responses to the interview protocol questions and their responses to the PSSM survey instrument items. The other six original interview participants’ interview responses coincided with the manner in which each responded on the PSSM survey instrument. Therefore, the researcher felt it was necessary to seek clarification on the discrepancies between the participant’s original interview responses and their responses to the PSSM survey instrument items. The follow-up interviews with the six selected participants were conducted over a 1-week period at participant school sites. Follow-up interview lasted a total of 46 min 47 sec. The duration of the interviews ranged from 5 min 9 sec to 14 min 32 sec with the average follow-up interview lasting approximately 4 min 48 sec.

*Interview Protocol Development*

The second point of integration between the two phases was in the development of the interview protocol questions based on the quantitative data analysis. To further investigate the relationship between belonging and academic achievement, interview questions were developed by integrating the results from the first, quantitative phase, with the
extant literature on the subject. The interview protocol consisted of 25 questions. A copy of the interview protocol is provided in Appendix M. An open-ended semi-structured interview protocol was developed that included an exact wording and sequence of questions determined in advance for all participants to be asked the same basic questions in the same order. The questions asked were framed in an open-ended format (Teddlie & Tashakkori, 2009). The first six questions served as ice-breaking questions to help relax the participant (Hatch, 2002) and to assist in gathering background information about the participant, their family, previous school and transfer experience. In looking at questions from the PSSM with mean item scores that fell at or below 4 on the 5-point Likert-scale instrument for the sample of transfer students, questions 7 and 8 were developed to explore how alike and different their current school was from their previous school based on responses to question 16 on the PSSM (“I wish I were in a different school.”).

Questions 9, 10, and 11 were developed to explore the participant’s perception of being a part or not being a part of their new school based on PSSM question 1 (“I feel like a real part of (name of school).”), question 6 (“Sometimes I feel as if I don’t belong here.”), question 10 (“I am included in lots of activities at (name of school).”), and question 17 (“I feel proud of belonging to (name of school).”). Questions 12, 13, and 14 were developed to explore the degree to which the participant felt accepted and acknowledged as individuals at their new school based on responses to PSSM question 3 (“It is hard for people like me to be accepted here.”), question 4 (“Other students in this school take my opinions seriously”) and question 13 (“I can really be myself at this school”).
Questions 15 and 16 inquired about who the participant perceived as most welcoming at their new school based on PSSM question 2 (“People here notice when I’m good at something.”) and question 5 (“My teachers at (name of school) are interested in me). Questions 17 and 18 were developed to explore whether the participant felt they were treated with respect and if they felt respected based on PSSM question 11 (“I am treated with as much respect as other students.”). Questions 19 and 20 were developed to allow the participant to compare himself/herself to their peers and the new school based on PSSM question 12 (“I feel very different from most other students here.”) as well as make recommendations for changes to their new school. Questions 21, 22, and 23 were developed to explore the academic differences and similarities between the participant’s current and previous schools based on the academic achievement score results obtained for all survey participants.

Data Analysis

This study used a sequential QUAN→qual analysis with the quantitative phase occurring first, followed by a qualitative phase (Teddlie & Tashakkori, 2009). The data analysis from phase 1 guided the data collection in phase 2.

Phase 1: Quantitative

Preparing the data for analysis. Regression analysis requires the use of interval level data therefore, two of the independent variables, socioeconomic status (free/reduced lunch status) and ethnicity required dummy coding because these variables did not represent continuous variables and included “more than two mutually exclusive catego-
ries” (Schroeder et al., 1986, p. 57) for each variable. For SES, “paid” lunch was used as the referent group with free and reduced lunch status dummy coded for analysis. For ethnicity, “White” was used as the referent group with Black, Hispanic and Asian dummy coded for analysis.

To derive a measure for academic achievement, the end of first semester 2009 numerical grades (0 – 100) were obtained from school records for each participant in the four core subject areas of Math, Science, Language Arts (LA), and Social Studies (SS). To determine if these four scores could be used to adequately represent the academic achievement of a participant, factor analysis was conducted using the grades from the four core subjects. Factor analysis is the replacement of multiple variables, such as the four core subject grades, that have been measured with a mathematically equivalent variable, Achievement, which has not been measured (Tabachnick & Fidell, 2001). Using the Statistical Package for Social Sciences software (SPSS) v17.0, the factor analysis can be found under the heading of data reduction in the ANALYSIS procedure-menu of SPSS. Factor Analysis was conducted on the participant scores from four core subjects – Math, Science, Language Arts (LA), and Social Studies (SS) – with all loading onto one single construct representing academic achievement with 73.9% of the variation in academic achievement being explained by these four components termed Achievement (see Table 4). The remaining 26.1% is explained by factors other than the four core subjects used.

The z-score for the grade of each academic core subject was calculated. All four z-scores were then totaled and averaged for each participant. The average z-score was then adjusted to a Thorndike (2005) normal distribution with a mean score of 50 and a
Table 4

*Factor Analysis for Achievement Total Variance Explained*

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigen values</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
</tr>
<tr>
<td>1</td>
<td>2.956</td>
<td>73.900</td>
</tr>
<tr>
<td>2</td>
<td>.458</td>
<td>11.447</td>
</tr>
<tr>
<td>3</td>
<td>.328</td>
<td>8.188</td>
</tr>
<tr>
<td>4</td>
<td>.259</td>
<td>6.465</td>
</tr>
</tbody>
</table>

standard deviation of 10. This Thorndike score was then reported as “Achievement” for each participant to represent academic achievement.

**Descriptive and inferential statistics.** Descriptive and inferential statistics for all tested variables were generated using SPSS v17.0 software. This information was used to describe the distribution of each individual variable for the sample (Healey, 2005). Inferential statistics to help understand the relationship between the dependent variables of academic achievement and the independent variables of sense of belonging, achievement motivation, ethnicity, gender, and SES were generated and analyzed to assess how the dependent variable is caused, influenced or affected by each independent variable (Creswell, 2005).

The initial preparation of the quantitative data required that the data received from the Student Demographic Sheet, Goodenow’s 18-item PSSM (1993b) and the PALS (Midgley et al., 2000) be input into a database for sorting. Descriptive statistics were used to summarize the quantitative data to enable the researcher to detect patterns and relationships among the variables (Teddlie & Tashakkori, 2009). Based on the responses from the instruments, frequency analyses were run for each variable/instrument question.
Dummy independent variables were introduced when entering data for SES, gender, and ethnicity (Schroeder et al., 1986).

*Structural equation model.* One of the most powerful statistical methods found in economics and behavioral research is structural equation modeling. The researcher used structural equation modeling to examine “the strength of all the hypothesized relationships between variables in a theoretical model” (Maruyama, 1998, p. 4). The researcher has the choice of using manifest (observed) variables or hypothetical (latent) variables. This relationship can be between two variables directly or “via other variables positioned between the two” (p. 4). If the latter is the case, the other two variables are known as mediating or intervening variables. For this study, a structural equation model in which achievement motivation is seen as an intervening factor on the impact of sense of belonging on academic achievement for students who transfer to affluent suburban middle schools (see Figure 4 for proposed model) is explored. According to Baron and Kenny (1986) a mediated, or intervening, relationship between three variables is evident if three conditions are met. There must be a significant relationship between the predictor variable (sense of belonging) and the outcome variable (academic achievement). Second, there must be a significant relationship between the predictor and mediator (achievement motivation). Lastly, there must be a significant relationship between the mediator (achievement motivation) and the outcome variable (academic achievement). Following the analysis of all variables, the relationship between the mediator and the outcome variable has to significantly reduce the effect of the predictor variable on the outcome variable alone. If this is the case, the association between the three variables fits the intervening model.
Specifically, in an intervening model, achievement motivation would account for a portion of the relationship between belonging and academic achievement in the researcher’s model.

A structural equation model was selected as a method of analysis because it is believed that sense of belonging has a causal effect on academic achievement. It is further believed that this relationship is intervened by achievement motivation factor. In the proposed model, achievement motivation was tested as a potential intervening variable for the impact of sense of belonging on academic achievement. A path diagram was developed at the beginning of the analysis then it was determined if the data supported the given model (Kline, 2005).

Path analysis was performed to test the theoretical model which was based on the extant literature and is presented in Figure 4. All analyses were conducted using the SAS v9.3 System’s PROC CALIS procedure. These analyses used the maximum likelihood method of parameter estimation, and all analyses were performed on the variance-covariance matrix. The PROC CALIS program includes a large number of statements that represent the causal model as a series of structural equations (Hatcher, 1994).

Because an item-by-item analysis of the belonging scale was not needed for the structural equation model in this study, an additive scale labeled Belonging was constructed by summing up the responses to the 18-items of the PSSM. Factor analysis assessing the ability to take the 18 items on the PSSM instrument as a single factor showed that every item loaded at or above a loading of 0.44 indicating that all 18 items define a
Figure 4. Conceptual structural equation model.
single factor – Belonging. Belonging was then used in subsequent analysis as a manifest variable as a measure of sense of belonging.

The path analysis reported here used manifest variables. Path analysis is often used to identify the variables which cause variability in the model’s dependent variables (Hatcher, 1994). All results are reported using a modified form of the notation developed by Bentler (1989) for the EQS structural equation program. The following paragraphs introduce the basic forms of these equations.

Under SAS v9.3 the procedure used to implement covariance analysis was PROC CALIS. This SAS PROC allows several descriptive techniques of how the path model can be analyzed. Among these techniques are the following: (a) original covariance structure analysis model (COSAN); (b) reticular action model (RAM); (c) Linear equations model (LINEQS); (d) Hierarchical Factor Analysis Models; and (e) First-order Autoregressive Longitudinal Factor Model. The modeling technique best fitting this study data was LINEQS.

The LINEQS statement is used to identify, through a series of equations, those variables having direct effects on the dependent variables in the path model. As noted, this is a system of equations with one equation for each of the dependent variables. The most general form of the LINEQS statement is as follows:

LINEQS

\[ v = p_v + p_v + p_v + \ldots + e, \]
\[ v = p_v + p_v + p_v + \ldots + e, \]
\[ v = p_v + p_v + p_v + \ldots + e, \]
\[ \vdots \]
\[ \vdots \]
\[ v = p_v + p_v + p_v + \ldots + e; \]
where,

\[
\begin{align*}
&v = \text{manifest variables} \\
&p = \text{path coefficients} \\
&e = \text{residual term for corresponding dependent variables.}
\end{align*}
\]

The path coefficients should be significantly different from zero in order for the model to be supported (Hatcher, 1994).

Kline (1998) recommends that at least four fit indices be used before determining if a proposed model is a good fit. Chi square is a general goodness-of-fit test that tests the significance of the distribution of scores for a single variable. The chi-square test for independence is used for analyses involving two variables (preferably with 5 or less categories per variable) where the greater the difference between the observed distribution of scores and the expected distribution, the more likely the observed scores were not obtained by random chance and are indeed independent of each other (Healey, 2005; Jöreskog & Sörbom, 1997). In using chi square as a goodness-of-fit test, the researcher looks for the chi square value to be small (close to zero) and the \( p \) value to be large (approaching 1.00 is best) (Healey, 2005).

Additional goodness-of-fit indices were derived to supplement chi square. The additional indices derived included: The Goodness-of-Fit Index or GFI, the Normed Fit index, or NFI (Bentler & Bonett, 1980), the Comparative Fit index, or CFI (Bentler, 1989), and the Root Mean Square Error of Approximation index, or RMSEA, to ascertain the quality of the proposed structural equation model. The Goodness-of-Fit index measures the percent of observed covariances explained by the covariances of the predicted model. The GFI can range from 0 to 1 with a value of .95 considered as a good cut-off for a good model fit. The NFI and CFI may range in value from 0 to 1, where 0 represents a fit associated with a “null” model (one specifying that all variables are un-
correlated), and 1 represents a fit associated with a “saturated” model (a model with 0 degrees of freedom that perfectly reproduces the original covariance matrix). The CFI is a variation on the NFI that has been shown to be less biased in small samples (Bentler, 1989). Values on the NFI and CFI over .9 indicate an acceptable fit between model and data. Bentler (1990) has recommended that the CFI be the index of choice when determining goodness-of-fit. RMSEA is the root mean square error of approximation and represents a “badness-of-fit” index. For this indicator, the best fit has a coefficient of zero and a coefficient less than 0.05 indicates an excellent fit for the model. A coefficient under 0.08 indicates an acceptable fit (Kline, 1998).

The development and initial analysis of the conceptual model yielded the path coefficients and indices of fit. These results offered a baseline from which new model modifications were made. Newly proposed models were examined against these baseline values and indices in order to judge the adequacy of the newer models. The underlying goal of this repetitious process was to find the best model to fit the actual data. In other words, the goal was to define a final set of equations, wherein a zero difference between the actual data and estimated parameters indicates a model which is consistent with the data. Further, this model of zero difference containing some minimum number of variables may be repeatedly modified to produce a final model. This process of final model development is a repetitious process that is not standardized and objective, but requires some subjectivity on the part of the researcher. Additionally, some authors believe successful model building is a mixture of components; specifically, “modeling of a complex data set is part science, part statistical method, and part personal experience and common sense” (Hosmer & Lemeshow, 2001, p. 157).
Because modeling is not a strictly standardized process, several suggested methods for achieving this goal are found in the literature. A brief summary of some of the more popular approaches are offered here. A three-step process focusing on the adequacy of: (a) parameter estimates, (b) the measurement model, and (c) the model as a whole is offered by Byrne (2009). Mulaik and Millsap (2000) present the following four-step approach to models: (a) conduct an exploratory factor analysis; (b) a confirmatory factor analysis testing hypotheses about certain relations among and between variables; (c) specifying relations among the variables; and (d) if an acceptable fit is found, proceed with parameter testing.

The process used in this model modification is a hybrid process using components of both the three-step and four-step processes shown above. The five-step process listed below may be thought of as “a search for an ideal fit.” It follows Hatcher (1994) and uses the following characteristics: (a) absolute values in the normalized residual matrix should not exceed 2.00; (b) the p value associated with the model chi-square should be greater than .05; the closer to 1.00, the better; (c) the comparative fit index (CFI) should exceed 0.9; (d) the $R^2$ for each dependent variable should be fairly large; and (e) the absolute value of t statistics for each path coefficient should exceed 1.96, and the standard errors should be non-trivial (exceed .05).

**Phase 2: Qualitative**

Consistent with the sequential study design, the interview protocol for the qualitative phase was developed after the data collection and analysis of the quantitative phase was completed. This allowed the researcher to develop questions that assisted in expand-
ing upon and further explaining the quantitative results. The procedures for preparing the qualitative data for analysis required the researcher to transcribe text from interviews, prepare the data for computer analysis (Creswell, 2007). Following the qualitative interviews, the tapes were transcribed into a word-processing file for further analysis. The transcribed text was reviewed for accuracy by listening to the interview tapes. Next, the researcher explored the qualitative data by reading through the data, making notes or memos in the margins of the documents/texts and beginning to develop a qualitative codebook (Creswell).

The coding process entails the grouping of ideas presented by participants into “increasingly broader perspectives” (Creswell & Plano Clark, 2007, p. 132). The assigned codes for each group of evidence are then grouped into larger categories of themes. A thematic analysis occurred following the transcription and coding of the participant interviews. The search for emergent themes reflected in the participant responses assisted the researcher in understanding the experiences of students who transferred to affluent suburban middle schools. Contextualizing strategies were used to determine patterns across the participant responses to the interview questions (Teddlie & Tashakkori, 2009). Thematic analysis assists the researcher in conveying the students’ perceptions of belonging to provide answers to the posed qualitative research questions (Creswell & Plano Clark).

Legitimation

According to Onwuegbuzie and Johnson (2006), “legitimation refers to the difficulty in obtaining findings and/or making inferences that are credible, trustworthy, de-
pendable, transferable, and/or confirmable” (p. 52) in a mixed methods study. Establishing validity in mixed methods research has an increased level of difficulty because independently quantitative and qualitative methods bring their own validity concerns that are further compounded when the two methods are combined (Onwuegbuzie & Johnson). To minimize these concerns, legitimation was addressed at two levels: for the quantitative and qualitative phases separately and then the quality of the resulting mixed methods meta-inferences as outlined below.

Quantitative Data

Construct validity of both instruments was determined by examining prior studies that used these measures. The scales have been used in school districts at the elementary, middle, and high school levels with students from socioeconomic status ranging from low- to middle-income consisting of ethnically diverse populations (Goodenow, 1993b; Midgley et al., 2000).

Additionally, the researcher determined internal consistency reliability for the data from the instruments after they were completed. Following analysis of the quantitative data, internal consistency reliability findings were reported on the sample population. A correlation was then run to determine if the instruments consistently measure participant responses in the same way with the same participants under the same conditions. This was accomplished using Cronbach’s alpha (Thorndike, 2005).

Furthermore, the researcher checked all demographic information including the self-reported data such as ethnicity, gender, SES (as measured by lunch status), and first
semester grades in core academic subjects against cumulative files as verification to improve data credibility.

**Qualitative Data**

A minimum of three verification procedures were used, as recommended by Creswell (2007), to establish credibility and trustworthiness of the findings (Lincoln & Guba, 1985) within the qualitative phase. The researcher used peer debriefing; thick, rich descriptions; and member checking to minimize researcher bias and therefore potential threats to the validity of the study.

Peer debriefing brought another set of eyes to the qualitative data and its analysis. This assisted the researcher in clarifying interpretations and identifying possible sources of bias (Teddlie & Tashakkori, 2009). Dr. Nataliya Ivankova, an Associate Professor at The University of Alabama at Birmingham whose specialty areas include Research Design, Qualitative Research, and Mixed Methods Research, was asked to review the data and analysis for this study. Because she is familiar with qualitative research and also serves as a co-chair for the researcher’s dissertation committee, her input was invaluable in clarifying interpretations and monitoring researcher biases.

Thick, rich descriptions required the researcher to make detailed descriptions of the participants, the research setting, and the themes to enable other researchers to make comparisons to their settings (Teddlie & Tashakkori). Through the descriptions, readers are able to determine if the findings apply to their setting because of common characteristics with the study (Creswell, 2007). As often as possible, the researcher included quotes from the participants in the analysis to support the descriptions and data interpretation.
Member checking involves allowing the participants in the study to check the accuracy of the interpretation of the data and the themes summarized by the researcher (Lincoln & Guba, 1985). A draft of the qualitative phase of chapter 4 including the participant descriptions and theme development was mailed to each participant for them to accept, reject or request edits. The participants were able to email or phone the researcher to discuss and request modifications. Although no modifications were requested, if a participant had requested that their narrative be edited, the participant and researcher would have worked to make the necessary revisions. If a participant rejected the summary of their interview, the participant would be released from the study. Agreement between the participants and the researcher provides evidence for the trustworthiness of the results (Creswell, 2005).

Mixed Methods

Of the nine legitimization types described by Onwuegbuzie and Johnson (2006), the researcher used inside-outside legitimization, weakness minimization legitimation, and sequential legitimation to establish validity and quality of meta-inferences for this mixed methods study. Inside-outside legitimation “refers to the degree to which the researcher accurately presents and utilizes the insider’s view and the observer’s view” (p. 58). Inside-outside legitimization was monitored through peer review to ensure that the interpretation has the insider’s viewpoint represented as well as the outsider’s – the researcher (Onwuegbuzie & Johnson). Because this mixed methods study combined both quantitative and qualitative data, the weaknesses from one approach were offset by the strengths of the other in combining, weighting and interpreting the results of the study.
Sequential legitimation relates to the threat posed by the sequencing of the data collection and analysis of the study (Onwuegbuzie & Johnson). Quantitative results from the first phase could threaten the qualitative results in the second phase. Steps were taken during the quantitative phase to ensure reliability and credibility in the analysis including an external audit under the supervision of the committee.

**Ethical Considerations**

The researcher obtained permission from the University of Alabama at Birmingham Institutional Review Board (IRB) for Human Use (see Appendix B). Because this research involves children, a vulnerable population, an expedited review was required. Each school district’s superintendent granted permission for all seventh-grade and eighth-grade students from the six middle school sites who have transferred into the respective schools (i.e., transferred into the school district to begin their middle school career in sixth grade or afterwards), to be recruited to participate. Student lists were generated by the administrators/registrars of students who fit the above criteria at each school. The lists were then provided to the researcher to allow a recruitment letter and a letter of consent/assent to the students’ parent/guardian to be forwarded to the potential participants. The informed consent letter explained the purpose, risks, benefits, alternatives, confidentiality, withdrawal procedures, cost, payment, legal rights, and questions. Students whose parents provide consent for participation were surveyed in May 2010 by the researcher during a non-academic time determined by each school administrator. Participants were informed of any potential harm as well as benefits of study participation. The interview
protocol questions were not included in the original IRB application. The researcher developed the questions following an analysis of the quantitative data. Therefore, a UAB IRB amendment was filed with the interview protocol for approval prior to proceeding with the qualitative data collection.

Participants’ answers were stored electronically and all hard copies were filed and stored in a locked metal cabinet as well. All questions were read to the participants by the researcher in order to ensure that language was not a barrier for participation. The principal investigator, as a middle school administrator, had direct involvement with some of the participants in her school.

The qualitative data (interview data) were recorded using audiotapes with permission from participants and the participant’s parent/guardian. Student names were not identified in the study. Participant names were used in the quantitative phase to correctly match the scale scores with semester averages from cumulative files and demographic information. Additionally, names were used by the researcher to contact students selected to participate in the interview phase of the study. Pseudonyms were used for all participants in the reporting of the qualitative research findings. All conversations took place at the research site or a mutually agreed upon site for the interviews and remain confidential. The research was discussed only by parties directly involved in the study.

Role of the Researcher

At the time of the study, the researcher was an assistant principal in a central Alabama affluent suburban middle school. The researcher’s professional career has been spent in affluent suburban schools, both middle school and high schools. As an adminis-
The researcher has seen the enrollment of transfer students increase each year. The typical transfer student fails to achieve academically at the level of their peers who have been in the school or school district for a longer period of time. The researcher has observed this phenomenon across ethnicity, gender and socioeconomic status. However, in the researcher’s experience, the students from a socioeconomic status lower than the other students in the school achieve at a lower level academically.

The role of the researcher changed during the research process in this mixed methods study. The quantitative phase required the researcher to have an objective view of the data without involving personal feelings as the descriptive statistics were derived from the responses to the demographic sheet, the PSSM and the PALS. This objectivity allowed the researcher to look at the results alone without interjecting personal feelings. During the second, qualitative phase, the researcher assumed a subjective view in order to interpret the student responses from the in-depth interviews. This allowed the researcher to see the participants as individuals taking their situations and characteristics into consideration. Both an objective and subjective view of the data provided the researcher with a better view of the data related to the phenomenon under investigation.

Summary

Chapter 3 outlines the methodology that was used to conduct the research necessary to answer the research questions. The rationale for using the sequential explanatory research design was provided. A description of the sample and population was also included in the chapter. The final sections of this chapter included a description of the pro-
posed data collection and analysis procedures, legitimation, ethical considerations, and role of the researcher.
CHAPTER 4
QUANTITATIVE RESULTS AND QUALITATIVE FINDINGS

The purpose of chapter 4 is to present the results of the data collection and analysis described in chapter 3. The results of the first, quantitative, phase are presented including descriptive statistics, regression analysis to determine the relationship and predictive value among the tested variables followed by the exploration of a structural equation model to “estimate the strength of all the hypothesized relationships between variables in the theoretical model” (Maruyama, 1998, p. 4). The findings from the interviews with select participants in the qualitative phase of the study are then described. Chapter 4 concludes with a summary of all results and findings.

Phase 1: Quantitative

Participant demographics. The Participant Demographic Sheet, PSSM, and PALS were completed by 168 students in seventh grade and eighth grade who had transferred to their middle school at or after the beginning of their sixth-grade year. These students were from six affluent suburban middle schools located in three school districts in the Southeast United States.

Table 5 shows the participant demographic information by ethnicity, gender and SES as a percentage of the entire sample. The majority of the participants were females (57%). White and Black students were equally represented with each comprising 43.5% of the participant sample. Other ethnicities participating included Hispanic (7.74%) and
Table 5

<table>
<thead>
<tr>
<th>Description</th>
<th>f</th>
<th>% of sample</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>73</td>
<td>43.45</td>
</tr>
<tr>
<td>Black</td>
<td>73</td>
<td>43.45</td>
</tr>
<tr>
<td>Asian</td>
<td>9</td>
<td>5.36</td>
</tr>
<tr>
<td>Hispanic</td>
<td>13</td>
<td>7.74</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>73</td>
<td>43.45</td>
</tr>
<tr>
<td>Female</td>
<td>95</td>
<td>56.55</td>
</tr>
<tr>
<td><strong>SES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paid Lunch</td>
<td>104</td>
<td>61.91</td>
</tr>
<tr>
<td>Reduced Lunch</td>
<td>14</td>
<td>8.33</td>
</tr>
<tr>
<td>Free Lunch</td>
<td>50</td>
<td>29.76</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>168</td>
<td></td>
</tr>
</tbody>
</table>

Asian (5.36%). The representation of the participants from four of the school sites (School Sites A, C, D, and E) was evenly distributed with the other two school sites (School Sites B and F) varying significantly in representation. School Site B only accounted for 2% \( (N = 4) \) of the sample whereas School Site F contributed 45% \( (N = 76) \) of the participant sample. The free and/or reduced lunch status of each participant was used as a proxy for his or her SES. Of the 168 participants, 50 (30%) received free lunches, 14 (8%) paid a reduced price for their lunches, and 104 (62%) paid full price for their lunches.

Table 6 shows the participant demographic information by ethnicity, gender and SES by school site for the 168 survey participants. In School Site A, the majority of the participants paid full price for their lunches (61%) with 33% receiving free lunches and only one participant (6%) receiving reduced price lunch. In School Site B, of the four participants, 75% paid full price for their lunches and one participant (25%) received free
Table 6

Demographics by School Site (N = 168)

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>A (n = 18)</th>
<th>B (n = 4)</th>
<th>C (n = 24)</th>
<th>D (n = 16)</th>
<th>E (n = 30)</th>
<th>F (n = 76)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>9</td>
<td>3</td>
<td>7</td>
<td>10</td>
<td>18</td>
<td>26</td>
</tr>
<tr>
<td>Black</td>
<td>8</td>
<td>1</td>
<td>15</td>
<td>4</td>
<td>6</td>
<td>39</td>
</tr>
<tr>
<td>Asian</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>A (n = 18)</th>
<th>B (n = 4)</th>
<th>C (n = 24)</th>
<th>D (n = 16)</th>
<th>E (n = 30)</th>
<th>F (n = 76)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>10</td>
<td>3</td>
<td>12</td>
<td>7</td>
<td>8</td>
<td>35</td>
</tr>
<tr>
<td>Female</td>
<td>8</td>
<td>1</td>
<td>12</td>
<td>9</td>
<td>22</td>
<td>41</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SES</th>
<th>A (n = 18)</th>
<th>B (n = 4)</th>
<th>C (n = 24)</th>
<th>D (n = 16)</th>
<th>E (n = 30)</th>
<th>F (n = 76)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paid Lunch</td>
<td>11</td>
<td>3</td>
<td>15</td>
<td>12</td>
<td>21</td>
<td>42</td>
</tr>
<tr>
<td>Reduced Lunch</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Free Lunch</td>
<td>6</td>
<td>1</td>
<td>8</td>
<td>3</td>
<td>6</td>
<td>26</td>
</tr>
</tbody>
</table>

In School Site C, almost twice as many participants (63%) paid full price for their lunches as those who received free lunches (33%). One participant (4%) in School Site C received reduced priced lunch. The majority of the participants in School Site D (75%) paid full price for their lunches. Again, only one participant (6%) received reduced priced lunch and 19% received free lunches. School Site E had 70% of its participants pay full price for their lunches, while 20% received free lunches and 10% paid a reduced price for their lunches. In School Site F, the majority of the participants (55%) paid full price for their lunches. Free lunches were received by 34% of the participants in School Site F and the remaining 11% received reduced price lunches.

Table 7 represents the total number of seventh-grade and eighth-grade students by ethnicity and school site. In comparing the study participants representing transfer students with the overall school populations they were now a part of, the study
Table 7

**Number of Seventh-Grade and Eighth-Grade students by Ethnicity and School Site**

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>513</td>
<td>378</td>
<td>303</td>
<td>687</td>
<td>411</td>
<td>411</td>
</tr>
<tr>
<td></td>
<td>68.9%</td>
<td>80.6%</td>
<td>57.7%</td>
<td>83.2%</td>
<td>72.1%</td>
<td>58.6%</td>
</tr>
<tr>
<td>Black</td>
<td>151</td>
<td>61</td>
<td>165</td>
<td>66</td>
<td>104</td>
<td>197</td>
</tr>
<tr>
<td></td>
<td>20.3%</td>
<td>13.0%</td>
<td>31.4%</td>
<td>8.0%</td>
<td>18.2%</td>
<td>28.1%</td>
</tr>
<tr>
<td>Asian</td>
<td>42</td>
<td>8</td>
<td>11</td>
<td>35</td>
<td>23</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>5.6%</td>
<td>1.7%</td>
<td>2.1%</td>
<td>4.2%</td>
<td>4.0%</td>
<td>9.4%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>134</td>
<td>19</td>
<td>40</td>
<td>32</td>
<td>32</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>4.7%</td>
<td>4.1%</td>
<td>7.6%</td>
<td>3.9%</td>
<td>5.6%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Total</td>
<td>745</td>
<td>469</td>
<td>525</td>
<td>826</td>
<td>570</td>
<td>701</td>
</tr>
</tbody>
</table>

**percentages may not total to 100% due to other ethnic representations in the school**

participants had a higher percentage of students receiving free lunch (i.e., lower SES).

Additionally, in comparison to the entire school population the study participants who represented transfer students had a lower percentage of White students and a higher percentage of Black and Hispanic students.

Descriptive statistics. Table 8 displays the descriptive statistics for the variables “belonging”, “motivation” and “academic achievement” in the study. The Psychological Sense of School Membership (Goodenow, 1993b) was administered to assess each participant’s sense of school belonging. The mean PSSM score for a participant could range from 1 to 5. A higher mean score indicated a greater sense of belonging by the participant at the school. The internal consistency reliability achieved for this sample of participants with the PSSM (Cronbach’s alpha) was at .905. The benchmark for internal
consistency reliability, for a low stakes instrument such as the PSSM and the PALS, is .700 (Nunnally & Bernstein, 1994).

PALS was administered to determine the dominant achievement goal orientation of each participant. The reported mean score for mastery goal orientation could range from 1 to 5. Of the 168 students participating in the study, the mastery goal orientation was stronger for the majority of the students followed by performance avoidance orientation. The internal consistency reliability achieved for this sample of participants for mastery goal orientation with the PALS was reported at .868. The academic achievement score indicates the student’s performance in the four core academic subjects during the first semester of 2009. Because the students’ academic achievement scores were converted to the Thorndike (2005) scale which has a mean of 50, the participants’ mean score of 50.09 indicates that the students participating in the study had average academic achievement during the first semester.

Table 8

<table>
<thead>
<tr>
<th>Description</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSSM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belonging</td>
<td>3.88</td>
<td>0.71</td>
</tr>
<tr>
<td>PALS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mastery Orientation</td>
<td>4.49</td>
<td>0.63</td>
</tr>
<tr>
<td>Academic Achievement</td>
<td>50.09</td>
<td>8.52</td>
</tr>
</tbody>
</table>

Note: PSSM = Psychological Sense of School Membership; PALS = Patterns of Adaptive Learning Survey.
Table 9 further displays the descriptive statistics for the variables “belonging,” “achievement motivation” and “academic achievement” by ethnicity and SES. The mean score for the PSSM was highest for White participants while lowest for the Hispanic transfer students represented in the study. The mean score for both Black and Hispanic transfer students was lower than the mean score for the sample. Participants receiving free lunch had a lower mean score on the PSSM indicating a lower sense of belonging.

Both White and Hispanic transfer students had a mastery goal orientation mean score that was lower than the sample mean for this study. Similarly, the paid lunch study participants had the lowest mean score for the measure for achievement motivation. Academic achievement was lowest for Black and Hispanic transfer students which was also below the sample mean.

Table 9

<table>
<thead>
<tr>
<th></th>
<th>Belonging</th>
<th>Mastery Orientation</th>
<th>Academic Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>4.04</td>
<td>4.39</td>
<td>53.60</td>
</tr>
<tr>
<td>Black</td>
<td>3.77</td>
<td>4.57</td>
<td>46.75</td>
</tr>
<tr>
<td>Hispanic</td>
<td>3.63</td>
<td>4.48</td>
<td>46.52</td>
</tr>
<tr>
<td>Asian</td>
<td>3.96</td>
<td>4.73</td>
<td>53.91</td>
</tr>
<tr>
<td>Paid</td>
<td>3.96</td>
<td>4.46</td>
<td>51.51</td>
</tr>
<tr>
<td>Free</td>
<td>3.71</td>
<td>4.51</td>
<td>46.85</td>
</tr>
<tr>
<td>Reduced</td>
<td>3.90</td>
<td>4.64</td>
<td>50.79</td>
</tr>
</tbody>
</table>

Regression analysis. In preparation for addressing the central quantitative research question, the researcher began by answering the subquestions: “What is the role of student demographic characteristics (ethnicity, gender, SES) in the relationship be-
between belonging and academic achievement?” and “What is the role of achievement motivation in the relationship between belonging and academic achievement?” Consequently, nine null hypotheses were developed to address each relationship. Regression analysis of the participant data were conducted to determine if there was a statistically significant relationship between the variables being analyzed and to address each study null hypotheses.

**Null hypothesis 1:** “There will be no significant interaction in belonging score related to gender for students who transfer to affluent suburban middle schools.” Table 10 shows the results of the regression analysis which revealed that gender is not a significant predictor of belonging scores, $\beta = 2.88$, $t(166) = 1.45$, $p < .05$. Therefore, the null hypothesis was retained for gender. Gender explained only a small proportion of variance in the belonging score of a student, $R^2 = .01$, $F(1, 166) = 2.09$, $p < .05$. These results indicated that students who transferred to affluent middle school had similar belonging scores independent of their gender.

<table>
<thead>
<tr>
<th>df</th>
<th>F</th>
<th>p</th>
<th>$\beta$</th>
<th>$R^2$</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>1</td>
<td>2.09</td>
<td>0.15</td>
<td>2.88</td>
<td>0.01</td>
</tr>
</tbody>
</table>

**Null hypothesis 2:** “There will be no significant difference in belonging score related to socioeconomic status for students who transfer to affluent suburban middle schools.” Table 11 shows the results of the regression analysis which revealed that with paid lunch as a referent in the dummy coding, reduced lunch is not a significant predictor
of belonging scores, $\beta = -1.14$, $t(166) = -0.32$, $p < .05$; while free lunch is a significant predictor of belonging scores, $\beta = -4.89$, $t(166) = -2.23$, $p < .05$. This predictor of socioeconomic status with three levels accounted for only 2.9% of the variance in the belonging score of a student, $R^2 = 0.03$, $F(2, 166) = 2.49$, $p < .05$. The null hypothesis was retained for reduced lunch but rejected for free lunch status. These results indicated that students who transferred to affluent middle schools had similar belonging scores if the student received paid or reduced price lunch; however, if the student received free lunch, their belonging score was negatively impacted.

Table 11

<p>| SES and Belonging Regression Analysis |</p>
<table>
<thead>
<tr>
<th>df</th>
<th>$F$</th>
<th>$p$</th>
<th>$\beta$</th>
<th>$R^2$</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2.49</td>
<td>0.03</td>
<td>-4.89</td>
<td>0.03</td>
<td>-2.23</td>
</tr>
<tr>
<td>Free</td>
<td>0.03</td>
<td>-4.89</td>
<td>-2.23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduced</td>
<td>0.75</td>
<td>-1.14</td>
<td>-0.32</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Null hypothesis 3: “There will be no significant difference in belonging score related to ethnicity for students who transfer to affluent suburban middle schools.” Table 12 shows the results of the regression analysis which revealed that with White as the referent in the dummy coding, only Black students showed any statistically significant difference in their belonging score, $\beta = -5.22$, $t(166) = -2.49$, $p < .05$. Hispanic students did not show a statistically significant difference to White students in their belonging score, $\beta = -7.44$, $t(166) = -1.95$, $p < .05$. Additionally, Asian students did not show a statistically significant difference in their Belonging score when compared to the referent White student, $\beta = -1.38$, $t(166) = -0.31$, $p < .05$. This predictor with four levels accounted for only 4.7%
of the variance in the belonging score of a transfer student, \( R^2 = 0.05, F(3, 166) = 2.69, p < .05 \). The null hypothesis was rejected for Hispanic and Asian students but retained for Black students. These results indicated that students who transferred to affluent middle schools had similar belonging scores if the students were White, Hispanic, or Asian; however, if the student was Black, the belonging score was negatively impacted.

Table 12

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>df</th>
<th>( F )</th>
<th>( p )</th>
<th>( \beta )</th>
<th>( R^2 )</th>
<th>( t )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>3</td>
<td>2.69</td>
<td>0.05</td>
<td>-5.22</td>
<td>0.05</td>
<td>-2.49</td>
</tr>
<tr>
<td>Asian</td>
<td>0.76</td>
<td>-1.38</td>
<td>-0.31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.05</td>
<td>-7.44</td>
<td>-1.95</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Null hypothesis 4: “There will be no significant difference in belonging score related to motivation as measured by the student’s mastery goal orientation for students who transfer to affluent suburban middle schools.” Table 13 shows the results of the regression analysis which revealed that motivation showed a statistically significant interaction with belonging score, \( \beta = 5.56, t(166) = 3.67, p < .01 \). Motivation accounted for 8% of the variation in a student’s belonging score, \( R^2 = 0.08, F(1, 166) = 13.47, p < .01 \). Therefore, the null hypothesis was rejected for motivation. These results indicated that students who transferred to affluent middle schools had belonging scores that were positively impacted by their level of achievement motivation.
Table 13

**Motivation and Belonging Regression Analysis**

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>F</th>
<th>p</th>
<th>β</th>
<th>R²</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>1</td>
<td>13.47</td>
<td>0.00</td>
<td>5.56</td>
<td>0.08</td>
<td>3.67</td>
</tr>
</tbody>
</table>

Null hypothesis 5: “There will be no significant interaction in achievement related to gender for students who transfer to affluent suburban middle schools.” Table 14 shows the results of the regression analysis which revealed that gender accounted for only 2.1% of the variance in the achievement score of a transfer student, $R^2 = 0.02$, $F(1, 166) = 3.61$, $p < .05$. Gender did not have a statistically significant relationship with student achievement, $\beta = -2.50$, $t(166) = -1.90$, $p < .05$. Therefore, the null hypothesis was retained. These results indicated that students who transferred to affluent middle schools had similar academic achievement scores independent of their gender.

Table 14

**Gender and Achievement Regression Analysis**

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>F</th>
<th>p</th>
<th>β</th>
<th>R²</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>1</td>
<td>3.61</td>
<td>0.06</td>
<td>-2.50</td>
<td>0.02</td>
<td>-1.90</td>
</tr>
</tbody>
</table>

Null hypothesis 6: “There will be no significant difference in achievement related to socioeconomic status for students who transfer to affluent suburban middle schools.” Table 15 shows the results of the regression analysis, which revealed that SES (determined by using paid/reduced/free lunch status as a proxy) accounts for 6.2% of the variance in achievement score of a student, $R^2 = 0.06$, $F(2, 167) = 5.43$, $p < .05$. With paid lunch as a referent, a student’s status of receiving reduced lunch does not show statistical-
ly significant relationship to student achievement, $\beta = -0.47, t(167) = -0.21, p< .05$. However, free lunch status, results in a statistically significant drop in the student’s achievement score over students paying full price for their lunch, $\beta = -4.68, t(167) = -3.26, p< .05$. Therefore, the null hypothesis was rejected for reduced lunch but retained for free lunch. These results indicated that students who transferred to affluent middle schools had similar academic achievement scores if the students received paid or reduced price lunch; however, if the students received free lunch, their academic achievement score was impacted negatively.

Table 15

<table>
<thead>
<tr>
<th>SES and Achievement Regression Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>df</td>
</tr>
<tr>
<td>----</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>Free</td>
</tr>
<tr>
<td>Reduced</td>
</tr>
</tbody>
</table>

Null hypothesis 7: “There will be no significant difference in achievement related to ethnicity for students who transfer to affluent suburban middle schools.” Table 16 shows the results of the regression analysis which revealed that 16.6% of the variance in achievement score of a student can be explained by the student’s ethnicity, $R^2 = 0.17$, $F(3, 167) = 10.89, p< .001$. With White ethnicity used as the referent in dummy coding, a student with Black ethnicity results in a statistically significant difference in the student’s achievement score, $\beta = -6.86, t(167) = -5.28, p< .001$. Additionally, a student with Hispanic ethnicity results in a statistically significant difference in the student’s achievement score, $\beta = -7.12, t(167) = -3.00, p< .05$. However, a student with Asian ethnicity is
not statistically different from a White student’s achievement, $\beta = .29$, $t(167) = .10$, $p<.05$. Therefore, the null hypothesis was retained for Black and Hispanic students but rejected for Asian students. These results indicated that students who transfer to affluent middle schools had similar academic achievement scores if the students were White or Asian; however, if the students were Hispanic or Black, their academic achievement score were negatively impacted.

Table 16

<table>
<thead>
<tr>
<th>Ethnicity and Achievement Regression Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>df</td>
</tr>
<tr>
<td>-----</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>Black</td>
</tr>
<tr>
<td>Asian</td>
</tr>
<tr>
<td>Hispanic</td>
</tr>
</tbody>
</table>

_null hypothesis 8:_ “There will be no significant difference in achievement related to Motivation as measured by the student’s mastery goal orientation for students who transfer to affluent suburban middle schools.” Table 17 shows the results of the regression analysis which revealed that motivation showed no statistically significant interaction with achievement, $\beta = -0.12$, $t(167) = 0.91$, $p < .05$. Motivation accounted for 0% of the variation in a student’s achievement, $R^2 = 0.00$, $F(1, 167) = 0.01$, $p < .05$. Therefore, the null hypothesis was retained for motivation. These results indicated that academic achievement of students who transferred to affluent middle schools were not impacted by the students’ degree of achievement motivation as indicated by their mastery goal orientation.
Table 17

<table>
<thead>
<tr>
<th>df</th>
<th>F</th>
<th>p</th>
<th>β</th>
<th>$R^2$</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>1</td>
<td>0.01</td>
<td>-0.11</td>
<td>-0.12</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Null hypothesis 9: “There will be no significant difference in achievement related to belonging score for students who transfer to affluent suburban middle schools.” Table 18 shows the results of the regression analysis which revealed that 10.2% of the variance in achievement score of a student can be explained by the student’s sense of belonging, $R^2 = 0.10$, $F(1, 166) = 18.67$, $p < .001$. A student’s belonging was shown to be statistically significant in relation to the student’s achievement, $\beta = 0.21$, $t(166) = 4.32$, $p < .001$. Therefore, the null hypothesis was rejected. These results indicated that the academic achievement of students who transferred to affluent middle schools were positively impacted by their sense of belonging as indicated by their belonging score.

Table 18

<table>
<thead>
<tr>
<th>df</th>
<th>F</th>
<th>p</th>
<th>β</th>
<th>$R^2$</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belonging</td>
<td>1</td>
<td>18.67</td>
<td>&lt;.0001</td>
<td>0.21</td>
<td>0.10</td>
</tr>
</tbody>
</table>

In summary, the role of student demographic characteristics (ethnicity, gender, and SES) and achievement motivation in the relationship with belonging and academic achievement was addressed with regression analysis conducted using SAS 9.3 and indicated a statistically significant interaction between student sense of belonging and achievement motivation, free lunch status, and Black ethnicity. Additionally, a statistical-
ly significant interaction was found between student academic achievement and belonging, free lunch status, Black ethnicity and Hispanic ethnicity. These results can be interpreted to mean that when a student transfers to an affluent middle school, a strong sense of belonging can positively impact the achievement motivation of a student particularly for Black students or those who receive free lunch. Furthermore, when students transfer to an affluent middle school, their academic achievement can be significantly impacted by a stronger sense of belonging. This occurs specifically for students who receive free lunch, who are Black or who are Hispanic.

*Structural Equation Model.* Based on results of initial regression, the researcher turned to a type of path analysis called structural equation modeling, which allowed the researcher to consider multiple variable combinations to determine the relationship between sense of belonging, achievement motivation and academic achievement to address the central quantitative research question: “What is the relationship between sense of belonging, achievement motivation and academic achievement for transfer students to affluent suburban middle schools?”

Because an item-by-item analysis of the belonging scale was not needed for the structural equation model in this study, an additive scale labeled Belonging was constructed by summing up the responses to the 18-items of the PSSM. Factor analysis assessing the ability to take the 18 items on the PSSM instrument as a single factor showed that every item loaded at or above a loading of 0.44 indicating that all 18 items define a single factor – “Belonging.” Belonging was then used in subsequent analysis as a manifest variable as a measure of sense of belonging.
Previously reported factor analysis conducted on data from the participants’ scores for their four core subjects revealed that the four core subjects – Math, Science, Language Arts (LA), and Social Studies (SS) all load onto one single construct representing academic achievement labeled “Achievement.” Achievement was then used in subsequent analysis as a manifest variable as a measure of student academic achievement. The term “Motivation” was used in the structural equation model analysis to represent achievement motivation as measured by mastery goal orientation. Variable means and standard deviations for the three manifest variables (Achievement, Belonging and Motivation) and the number of participants in the sample by SES and gender are presented by ethnicity in Table 19. The mean score for White and Asian participants was above the mean Achievement score for the study. The Belonging score for Black and Hispanic participants fell below the mean score for Belonging for the entire sample population. The majority of the participants had a mean score for Motivation above the sample mean. Surprisingly, the White transfer students held a mean Motivation score slightly below the sample mean. Almost all of the White participants paid for their lunch indicating a higher SES. Whereas, Black students had an equal number of paid and free lunch recipients in this study. Overall, there were twice as many paid lunch participants in the study as free lunch recipients. The gender representation for White and Black participants was almost equal however, both Hispanic and Asian participants had more female participants than male participants. Overall, there were 30% more females in the study than males.
Table 19

*Variable Means, SES, and Gender by Ethnicity (N = 168)*

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Manifest Variables</th>
<th>SES</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Achievement</td>
<td>Belonging</td>
<td>Motivation</td>
</tr>
<tr>
<td>White</td>
<td>53.60</td>
<td>72.68</td>
<td>4.39</td>
</tr>
<tr>
<td>Black</td>
<td>46.75</td>
<td>67.67</td>
<td>4.57</td>
</tr>
<tr>
<td>Hispanic</td>
<td>46.52</td>
<td>65.31</td>
<td>4.48</td>
</tr>
<tr>
<td>Asian</td>
<td>53.90</td>
<td>71.33</td>
<td>4.73</td>
</tr>
<tr>
<td>Mean</td>
<td>50.09</td>
<td>69.79</td>
<td>4.49</td>
</tr>
<tr>
<td>SD</td>
<td>8.52</td>
<td>12.80</td>
<td>0.63</td>
</tr>
</tbody>
</table>

The correlations statistics for the study’s nine variables are presented in Table 20.

The correlations matrix indicates that few of the relationships are very strong. The two strongest relationships are between Achievement and Belonging and Achievement and Black ethnicity. The positive correlation for Achievement and Belonging indicates that as Belonging increases, Achievement increases. The negative correlation between Achievement and Black ethnicity indicates that Achievement decreases for Black students when compared to the referent group, White.

Equations. The initial three linear equations based on the independent variables of “Achievement,” “Motivation,” and “Belonging” were developed to represent the proposed path thought to reflect the interaction of the variables with their related levels in this study. These equations were developed based on the conceptual model depicted in Figure 4. These three linear equations (see equations 4.1, 4.2 and 4.3) were entered into LINEQS for analysis. Manifest variables for Achievement, Motivation and Belonging were used in the development of this model as represented.
Table 20

**Correlations Analysis for Variable Constructs**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Gend-</th>
<th>Free</th>
<th>Reduced</th>
<th>Achievement</th>
<th>Motivation</th>
<th>Belonging</th>
<th>Black</th>
<th>Hispanic</th>
<th>Asian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free</td>
<td>0.03</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduced</td>
<td>0.02</td>
<td>-0.20*</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belonging</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>0.06</td>
<td>0.26**</td>
<td>0.10</td>
<td>-0.35**</td>
<td>0.10</td>
<td>-0.16*</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>-0.12</td>
<td>0.20*</td>
<td>-0.01</td>
<td>-0.12</td>
<td>-0.01</td>
<td>-0.10</td>
<td>-0.25**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>-0.05</td>
<td>0.13</td>
<td>0.02</td>
<td>0.11</td>
<td>0.09</td>
<td>0.03</td>
<td>-0.21*</td>
<td>-0.07</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*Note:* *p ≤ .05; **p ≤ .001

*Equation 4.1 Achievement:* Motivation/Achievement + Belonging/Achievement + Black/Achievement + Hispanic/Achievement + Asian/Achievement + Free Lunch/Achievement + Reduced Lunch/Achievement + Gender/Achievement + e1

*Equation 4.2 Motivation:* Belonging/Motivation + e2

*Equation 4.3 Belonging:* Motivation/Belonging + Black/Belonging + Hispanic/Belonging + Asian/Belonging + Free/Belonging + Reduced/Belonging + Gender/Belonging + e3

In equation 4.1, the variables Motivation, Belonging, Black, Hispanic, Asian, Free Lunch status, Reduced Lunch status and Gender plus a residual term (e1) were all theorized to have direct paths to the Thorndike (2005) score derived for Achievement. In the equation 4.2, the variable Belonging with an associated residual term (e2) were additionally theorized to have a direct path to the Motivation score. In equation 4.3, the variables Motivation, Black, Hispanic, Asian, Free Lunch status, Reduced Lunch status, and Gend-
er plus a residual term (e3) were further theorized to have direct paths to the variable Belonging.

Hatcher (1994) recommends that the sample size for a path analysis be 5 to 20 times the number of parameters in the model. This initial model had 32 parameters, therefore, the 168 participants in the quantitative phase of the study, was sufficient for use in this path analysis. The development and initial analysis of the conceptual model yielded the path coefficients in Table 21. The initial analysis was based on the estimation of 16 paths coefficients based on 167 observations for the nine variables. These results offered a baseline from which model modifications could be made. Newly proposed models were examined against these baseline values and indices in order to judge the adequacy of the newer models.

Equations 4.4, 4.5, and 4.6 represent the model with path coefficients. The sign of the coefficients show how the dependent and independent variables are related to each other in the equation. The negative path coefficient for Motivation indicates that Motivation is negatively correlated with Achievement. The positive path coefficient for Belonging indicates that Belonging is positively correlated with Achievement. Table 21 summarizes the data for the model equations. Figure 5 represents the initial model depicted in equation form.

**Equation 4.4**

\[
\text{Achievement:} -0.88\times \text{Motivation} + 0.17\times \text{Belonging} + -5.33\times \text{Black} + -5.14\times \text{Hispanic} + 1.38\times \text{Asian} + -1.51\times \text{Free} + 1.52\times \text{Reduced} + -0.85\times \text{Gender} + 1.00\times e1 \\
\]

<table>
<thead>
<tr>
<th>t value</th>
<th>0.50</th>
<th>-1.03</th>
<th>0.72</th>
<th>-0.84</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.92</td>
<td>3.63</td>
<td>-3.84</td>
<td>-2.14</td>
<td></td>
</tr>
</tbody>
</table>
Equation 4.5 Motivation: \(-0.03 \times \text{Belonging} + 1.00 \times e^2\)

\(t\) value: -1.27  

Equation 4.6 Belonging: \(14.92 \times \text{Motivation} - 6.99 \times \text{Black} - 7.82 \times \text{Hispanic} - 5.57 \times \text{Asian} + \)

\(t\) value: 2.41, -2.73, -1.80, -1.13  
+ \(-1.92 \times \text{Free} + -1.32 \times \text{Reduced} + -0.85 \times \text{Gender} + 1.00 \times e^3\)

\(-0.73, -0.35, -0.84\)

Table 21

Path Coefficients and Their Significance for Manifest Variables in Initial Model

<table>
<thead>
<tr>
<th>Manifest Variable</th>
<th>Independent Variable</th>
<th>Path Coefficient</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement</td>
<td>Motivation</td>
<td>-0.88</td>
<td>-0.92</td>
</tr>
<tr>
<td></td>
<td>Belonging</td>
<td>0.17</td>
<td>3.63***</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>-5.33</td>
<td>-3.84***</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>-5.14</td>
<td>-2.14*</td>
</tr>
<tr>
<td></td>
<td>Asian</td>
<td>1.38</td>
<td>0.50</td>
</tr>
<tr>
<td></td>
<td>Free lunch</td>
<td>-1.51</td>
<td>-1.03</td>
</tr>
<tr>
<td></td>
<td>Reduced lunch</td>
<td>1.52</td>
<td>0.72</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>-0.85</td>
<td>-0.84</td>
</tr>
<tr>
<td>Motivation</td>
<td>Belonging</td>
<td>-0.03</td>
<td>-1.27</td>
</tr>
<tr>
<td>Belonging</td>
<td>Motivation</td>
<td>14.92</td>
<td>2.41*</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>-6.99</td>
<td>-2.73**</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>-7.82</td>
<td>-1.80</td>
</tr>
<tr>
<td></td>
<td>Asian</td>
<td>-5.57</td>
<td>-1.13</td>
</tr>
<tr>
<td></td>
<td>Free lunch</td>
<td>-1.92</td>
<td>-0.73</td>
</tr>
<tr>
<td></td>
<td>Reduced lunch</td>
<td>-1.32</td>
<td>-0.35</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>-0.85</td>
<td>-0.84</td>
</tr>
</tbody>
</table>

*statistically significant at the \(p < .05\) level; ** statistically significant at the \(p < .01\) level; *** statistically significant at the \(p < .001\) level
Figure 5. Initial model representation with path coefficients.
The absolute value of the $t$ statistics for each path coefficient should be above 1.96 to be considered significant for the model at the .05 level (Hatcher, 1994). The path coefficient is statistically significant at the .01 level if $t$ exceeds 2.58 and at the .001 level if $t$ exceeds 3.30 (Hatcher). In this model, the significant path coefficients for Achievement are Belonging, Black ethnicity and Hispanic ethnicity. Belonging is not a significant path coefficient for Motivation. The significant path coefficients for Belonging are Motivation and Black ethnicity.

Table 22

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$p$</th>
<th>GFI</th>
<th>NFI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial</td>
<td>24.2625</td>
<td>7</td>
<td>0.0010</td>
<td>0.9701</td>
<td>0.8603</td>
<td>0.8746</td>
<td>0.1219</td>
</tr>
<tr>
<td>Recommended Range</td>
<td>GFI ≥ 0.95</td>
<td>NFI ≥ 0.90</td>
<td>CFI ≥ 0.90</td>
<td>RMSEA ≤ 0.08</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: GFI = Goodness-of Fit Index; NFI = Normed Fit Index; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation*

Table 22 shows four fit indices for this initial model. The model analyzed in Table 22 had a statistically significant chi-square value, $\chi^2 (7, N = 167) = 24.26, p < 0.05$. Although statistically significant, in using chi square as a goodness-of-fit test, the researcher desires the chi square value to be small (typically, less than 4.81) and the $p$ value to be large (the closer to 1.00 the better) (Healey, 2005) to be considered a good model. This restriction extends from the desire to retain the hypothesis of a null or zero difference. In other words, the raw data reflects no difference from the predicted data. As a guide for the appropriateness of the use of chi-square as a goodness of fit measure, the researcher wants the ratio of chi-square to degrees of freedom (df) to be less than two. For this
model this ratio is 3.466. In this case, rejection of the chi square would mean the model did not fit the data. Chi square should be supplemented with other goodness of fit indices because it can be influenced by factors other than the validity of the model. Three of the four fit indices calculated did not fall within the recommended range and therefore, the model is not supported. These were NFI, CFI and RMSEA. Although the $R^2$ value of Achievement showed that the eight variables represented in the model account for 23.97% of the variance in Achievement, the null hypothesis for this initial model was rejected, (the theoretical model does not fit the data).

The five-step process listed was considered in determining whether model modifications were needed. It follows Hatcher (1994), and uses the following characteristics: (a) Absolute values in the normalized residual matrix should not exceed 2.00; (b) The p value associated with the model chi-square should be greater than .05; the closer to 1.00, the better; (c) The comparative fit index (CFI) should exceed 0.9; (d) The $R^2$ for each dependent variable should be fairly large; (e) The absolute value of t statistics for each path coefficient should exceed 1.96, and the standard errors should be non-trivial (exceed .05).

Based on this process, the model needed to be modified to provide a better representation of the relationship between the variables. New linear equations were obtained based on the analysis of the initial model. Statistically significant paths and paths not found to be statistically significant in the initial model were retained based on the empirical evidence from the univariate analysis and extant literature. It is acceptable to keep paths considered not to be statistically significant in the model as they are noted within the context of a model whose overall fit is questionable due to the results of the fit indices (Hatcher, 1994). This second model involved removing Motivation, Asian ethnicity, Re-
duced lunch and Gender from the Achievement equation based. Hispanic ethnicity, Asian ethnicity, Reduced lunch and Gender were also removed from the Belonging equation for similar reasons.

Hatcher (1994) recommends that the sample size for a path analysis be 5 to 20 times the number of parameters in the model. This second model had 13 parameters, therefore, the 168 participants in the quantitative phase of the study, was sufficient for use in this path analysis. The analysis of the second model was based on the estimation of 8 paths coefficients based on 167 observations for six variables. Results of the analysis of model modification are reported in the following Table 23. Figure 6 represents the second model. These modifications resulted in the following equations:

*Equation 4.7 Achievement*: 0.16*Belonging + -5.58*Black + -5.19*Hispanic + -1.66*Free Lunch

<table>
<thead>
<tr>
<th>t value</th>
<th>3.46</th>
<th>-4.36</th>
<th>-2.21-1.21</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ 1.00*e1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Equation 4.8 Motivation*: -68.12*Belonging + 1.00*e2

<table>
<thead>
<tr>
<th>t value</th>
<th>-18.22</th>
</tr>
</thead>
</table>

*Equation 4.9 Belonging*: -6716.4*Motivation + 889.7*Black + -110.5*Free + 1.00*e3

<table>
<thead>
<tr>
<th>t value</th>
<th>-18.22</th>
<th>1.30</th>
<th>-0.15</th>
</tr>
</thead>
</table>
Table 23

*Path Coefficients and Their Significance for Manifest Variables in the Second Model*

<table>
<thead>
<tr>
<th>Manifest Variable</th>
<th>Independent Variable</th>
<th>Path Coefficient</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement</td>
<td>Belonging</td>
<td>0.16</td>
<td>3.46***</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>-5.58</td>
<td>-4.36***</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>-5.19</td>
<td>-2.21*</td>
</tr>
<tr>
<td></td>
<td>Free Lunch</td>
<td>-1.66</td>
<td>-1.21</td>
</tr>
<tr>
<td>Motivation</td>
<td>Belonging</td>
<td>-68.12</td>
<td>-18.22***</td>
</tr>
<tr>
<td>Belonging</td>
<td>Motivation</td>
<td>-6716.4</td>
<td>-18.22***</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>889.7</td>
<td>1.30</td>
</tr>
<tr>
<td></td>
<td>Free Lunch</td>
<td>-110.5</td>
<td>-0.15</td>
</tr>
</tbody>
</table>

*statistically significant at the $p < .05$ level; ** statistically significant at the $p < .01$ level; *** statistically significant at the $p < .001$ level

The results summarized in Table 23 suggest the path from Achievement to Free lunch is not statistically significant. The Black ethnicity and Free lunch paths are not statistically significant for Belonging. However, again, these significant path coefficients are noted within the context of a model whose overall fit is questionable due to the results of the fit indices. Table 24 shows four fit indices for this initial model. The model analyzed in Table 24 had a statistically significant chi-square value, $\chi^2 (4, N = 167) = 26.2221$, $p < .0001$. However, three of the other four fit indices (NFI, CFI, and RMSEA) were not within acceptable range. The ratio of chi-square to degrees of freedom (df) for this model is 6.556 which exceeds the recommended value of two (Hatcher, 1994). The $R^2$ value of Achievement showed that the four variables represented in the model account for 19.80% of the variance in Achievement. In consideration of the five-step process proposed by Hatcher, this model was rejected also. A second modification resulting in a third overall model was needed in search of a better representation of the data.
Figure 6. Second model representation with path coefficients.
Table 24

*Fit Indices for Second Model*

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$p$</th>
<th>GFI</th>
<th>NFI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second</td>
<td>26.2221</td>
<td>4</td>
<td>&lt;.0001</td>
<td>0.9540</td>
<td>0.7582</td>
<td>0.7622</td>
<td>0.1829</td>
</tr>
</tbody>
</table>

Recommended Range

- $\geq 0.95$
- $\geq 0.90$
- $\geq 0.90$
- $\leq 0.08$

*Note:* GFI = Goodness-of Fit Index; NFI = Normed Fit Index; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation

The third, and final, modification removed Motivation from the Belonging equation. Figure 7 represents the third, and final, model. While other paths were not statistically significant in the second model, these paths were retained based on the extant literature. The sample size for the path analysis was still acceptable based on this model having 12 parameters. The analysis of the third, and final, model was based on the estimation of 7 paths coefficients based on 167 observations for six variables.

These modifications resulted in the following equations:

- **Achievement**
  \[ \text{Achievement} = 0.16 \times \text{Belonging} + -5.58 \times \text{Black} + -5.19 \times \text{Hispanic} + -1.66 \times \text{Free lunch} + 1.00 \times e1 \]
  \[ t \text{ value} = 3.38 \quad -4.33 -2.21 \quad -1.20 \]

- **Motivation**
  \[ \text{Motivation} = 0.01 \times \text{Belonging} + 1.00 \times e2 \]
  \[ t \text{ value} = 3.68 \]

- **Belonging**
  \[ \text{Belonging} = -3.13 \times \text{Black} + -3.85 \times \text{Free lunch} + 1.00 \times e3 \]
  \[ t \text{ value} = -1.55 \quad -1.75 \]

The results of the path analysis are summarized in Table 25.
Figure 7. Final model representation with path coefficients.
<table>
<thead>
<tr>
<th>Manifest Variable</th>
<th>Independent Variable</th>
<th>Path Coefficient</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement</td>
<td>Belonging</td>
<td>0.16</td>
<td>3.38***</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>-5.58</td>
<td>-4.33***</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>-5.19</td>
<td>-2.21**</td>
</tr>
<tr>
<td></td>
<td>Free lunch</td>
<td>-1.66</td>
<td>-1.20</td>
</tr>
<tr>
<td>Motivation</td>
<td>Belonging</td>
<td>0.01</td>
<td>3.68***</td>
</tr>
<tr>
<td>Belonging</td>
<td>Black</td>
<td>-3.13</td>
<td>-1.55</td>
</tr>
<tr>
<td></td>
<td>Free lunch</td>
<td>-3.85</td>
<td>-1.75</td>
</tr>
</tbody>
</table>

*p* statistically significant at the *p* < .05 level; ** statistically significant at the *p* < .01 level; *** statistically significant at the *p* < .001 level

Table 26 shows that the model depicted in Figure 7 does not have a statistically significant chi-square, $\chi^2 (5, N = 167) = 7.3385, p < .05$. However, the ratio of chi-square to degrees of freedom (df) for this model is 1.468, which is below the recommended value of two (Hatcher, 1994) and the four fit indices were all within the acceptable range. Additionally, the $R^2$ value of Achievement showed that the four variables represented in the model account for 22.31% of the variance in Achievement. The $R^2$ value for Motivation showed that Belonging represents 7.55% of the variance in Motivation for this model. Last, the $R^2$ value of Belonging showed that the two variables represented in the model account for 4.26% of the variance in Belonging. In consideration of the five-step process proposed by Hatcher, this model was accepted.
Table 26

Fit Indices for the Final Model

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$p$</th>
<th>GFI</th>
<th>NFI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final</td>
<td>7.3385</td>
<td>5</td>
<td>0.1967</td>
<td>0.9858</td>
<td>0.9323</td>
<td>0.9750</td>
<td>0.0531</td>
</tr>
</tbody>
</table>

Recommended Range

|  $\geq 0.95$ | $\geq 0.90$ | $\geq 0.90$ | $\leq 0.08$ |

*Note: GFI = Goodness-of Fit Index; NFI = Normed Fit Index; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation*

Through model modification, the original conceptual model was modified two times. Table 27 shows the goodness of fit indices for the various models.

Table 27

Goodness of Fit Indices for Various Models

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$p$</th>
<th>GFI</th>
<th>NFI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial model</td>
<td>24.2625</td>
<td>7</td>
<td>0.0010</td>
<td>0.9701</td>
<td>0.8603</td>
<td>0.8746</td>
<td>0.1219</td>
</tr>
<tr>
<td>Second model</td>
<td>26.2221</td>
<td>4</td>
<td>&lt;.0001</td>
<td>0.9540</td>
<td>0.7582</td>
<td>0.7622</td>
<td>0.1829</td>
</tr>
<tr>
<td>Final Model</td>
<td>7.3385</td>
<td>5</td>
<td>0.1967</td>
<td>0.9858</td>
<td>0.9323</td>
<td>0.9750</td>
<td>0.0531</td>
</tr>
</tbody>
</table>

Recommended Range

|  $\geq 0.95$ | $\geq 0.90$ | $\geq 0.90$ | $\leq 0.08$ |

*Note: GFI = Goodness-of Fit Index; NFI = Normed Fit Index; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation*

The final model indicates that when Achievement, Motivation, and Belonging are considered together rather than independently as in univariate analysis, Achievement is impacted positively by Belonging and negatively by Black ethnicity, Hispanic ethnicity
and Free lunch status. For each increment in a transfer student’s belonging score, there is a corresponding increase in the student’s academic achievement score of .16 using the Thorndike scale. The negative impact of Black ethnicity reveals that a Black student’s achievement will be 5.58 lower compared to their White counterpart. The negative impact on Hispanic ethnicity reveals that a Hispanic student’s achievement will be 5.19 lower compared to their White counterpart. The negative impact on Free lunch status indicates that a student who receives Free lunch will have an achievement score that is 1.66 lower than their Paid lunch counterpart. A second equation in the model for Motivation indicates that a slight increase of 1 increment in Belonging results in a corresponding .01 increase in a student’s Motivation score. The Belonging equation indicates that a Black student’s belonging score will be 3.13 lower when compared to their White counterpart. Additionally, a free lunch student’s Belonging score will be 3.85 lower than a student who pays for their lunch.

The final model accounts for 22.31% of the variation in Achievement, 7.55% of the variation in Motivation and 4.26% of the variation in Belonging for a transfer student to an affluent suburban middle school. A limitation of this type of model modification is that data driven modifications such as the ones performed above lead to a model that fits the characteristics of the specific sample data however, it may not fit the theoretical framework of the researcher (Hatcher, 1994) or have the capability of being generalized to other samples or the population.
Summary of Quantitative Results

Analysis of the data using univariate regression analysis was conducted to obtain data to test the nine hypotheses posed to help answer the quantitative subquestions designed to summarize the relationship between the dependent variables of academic achievement and belonging with several independent variables including achievement motivation, SES, and ethnicity for data collected from seventh-grade and eighth-grade transfer students to affluent suburban middle schools. Significant results include a negative impact on belonging scores when students who receive free lunch or are Black transfer to affluent suburban middle schools. However, a higher achievement motivation, as measured by mastery goal orientation, will positively impact the transfer student’s sense of belonging. Additional findings show that there is a negative impact on academic achievement for students who receive free lunch, are Black or Hispanic, or have a low belonging score.

A structural equation model utilizing path analysis to determine the correlation between and among the variables was developed. The model was also used to determine if achievement motivation was an intervening factor between sense of belonging and academic achievement. The proposed model was based on the extant literature and the results of the regression analyses.

The results of the final model suggest that Achievement is positively impacted by Belonging but negatively impacted by Black ethnicity, Hispanic ethnicity and Free lunch status. Motivation is positively impacted by Belonging. Finally, Belonging is negatively impacted by Black ethnicity and Free lunch status for transfer students to affluent suburban middle schools.
Phase 2: Qualitative

Participant selection. Participants for the second, qualitative phase, were selected based on the sampling strategy described in chapter 3. A maximal variation sampling strategy followed by an extreme case selection strategy (Creswell, 2005) was employed to achieve the greatest variety of participants. This strategy selects participants that have varying combinations of demographic information to obtain a more diverse perspective and enrich the research on the relationship between belonging and academic achievement (Creswell, 2005). Twelve participants were chosen from the 168 participants who took part in the quantitative phase of the study by completing the PSSM, PALS, and Participant Demographic Sheet.

The first step in selecting the participants was to separate them into categories by ethnicity (White, Black, Hispanic and Asian). This variable was selected as the first point of separation to ensure that students from each ethnicity were represented in the interview sample. The participants who demonstrated extreme high or low belonging scores on the PSSM Scale were isolated. The mean belonging score for all participants in the study was 3.88. The standard deviation, which is a measure of how spread out the participant data is, was calculated as 0.71. This means that approximately 68% of the participants’ mean scores for the PSSM fell within 3.17 and 4.6 (one standard deviation) and 95% of the participant scores fell between 2.46 and 5.3 (two standard deviations) (Healey, 2005). A participant’s mean score of 5.3 is above the highest score possible. Additionally, only six participants fell below two standard deviations below the mean therefore, the researcher determined that only one standard deviation above and below the mean would be used as the measure for a determining a low score and a high score.
Within each ethnicity grouping, the researcher began the selection process with participants who scored beyond one standard deviation from the mean ($SD = .71$). A belonging score of below 3.17 (one standard deviation below the mean) was considered low and a belonging score of above 4.6 (one standard deviation above the mean) was considered high for this study based on the range of scores obtained by the researcher. This initial process of isolating the extreme belonging scores yielded 31 White, 21 Black, 3 Hispanic, and 4 Asian possible participants. Thirty-one participants scored above 4.6 on the PSSM scale and 28 scored below 3.17 on the PSSM scale.

After the participants with extreme belonging scores were isolated, the researcher further grouped the participants by academic achievement scores. The mean academic achievement score for all participants in the study was 50.09. For similar reasons as explained above, an academic achievement score below 41.47 (one standard deviation below the mean) was considered low and an academic achievement score of above 58.61 (one standard deviation below the mean) was considered high for this study based on the range of academic achievement scores obtained by the researcher. From the selected participants representing the four ethnicity groups with high and low belonging scores, the researcher began the secondary selection process with participants whose academic achievement scores were beyond one standard deviation from the mean ($SD = 8.52$). However, in each ethnic group an academic achievement score varying by one standard deviation on one or both of the extremes was not always available. In these cases, exceptions were made to consider participants who were just within one standard deviation from the mean and would fit the ethnic requirement first followed by the belonging score as prescribed in the qualitative sampling strategy. The researcher then used a maximal
variation sampling technique to further reduce the participants and select 12 who would be the best informants for the second, qualitative, phase (Patton, 2002). Participant demographic information is provided in Table 28.

Table 28

<table>
<thead>
<tr>
<th>Name</th>
<th>Grade</th>
<th>PSSM</th>
<th>Achievement Score</th>
<th>Mastery Goal Orientation</th>
<th>Representing</th>
<th>SES (lunch)</th>
<th>Gender</th>
<th>Ethnicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexis</td>
<td>7</td>
<td>2.83</td>
<td>43</td>
<td>4.40</td>
<td>Belong/Low</td>
<td>Paid</td>
<td>F</td>
<td>White</td>
</tr>
<tr>
<td>Barbara</td>
<td>7</td>
<td>4.06</td>
<td>60.72</td>
<td>5.00</td>
<td>Belong/High</td>
<td>Paid</td>
<td>F</td>
<td>Asian</td>
</tr>
<tr>
<td>Cassidy</td>
<td>8</td>
<td>4.72</td>
<td>60.93</td>
<td>3.80</td>
<td>Belong/High</td>
<td>Paid</td>
<td>F</td>
<td>White</td>
</tr>
<tr>
<td>Danielle</td>
<td>7</td>
<td>2.67</td>
<td>60.96</td>
<td>5.00</td>
<td>Belong/Low</td>
<td>Paid</td>
<td>F</td>
<td>White</td>
</tr>
<tr>
<td>Elizabeth</td>
<td>7</td>
<td>5</td>
<td>64.22</td>
<td>5.00</td>
<td>Belong/High</td>
<td>Paid</td>
<td>F</td>
<td>Black</td>
</tr>
<tr>
<td>Faith</td>
<td>7</td>
<td>4.94</td>
<td>57.3</td>
<td>5.00</td>
<td>Belong/High</td>
<td>Paid</td>
<td>F</td>
<td>Hispanic</td>
</tr>
<tr>
<td>Garrett</td>
<td>8</td>
<td>2.89</td>
<td>50.19</td>
<td>4.80</td>
<td>Belong/Low</td>
<td>Free</td>
<td>M</td>
<td>Black</td>
</tr>
<tr>
<td>Hunter</td>
<td>7</td>
<td>4.67</td>
<td>49.33</td>
<td>4.80</td>
<td>Belong/High</td>
<td>Free</td>
<td>M</td>
<td>Black</td>
</tr>
<tr>
<td>Ingrid</td>
<td>7</td>
<td>4.61</td>
<td>47.84</td>
<td>4.80</td>
<td>Belong/High</td>
<td>Paid</td>
<td>F</td>
<td>White</td>
</tr>
<tr>
<td>Jennifer</td>
<td>8</td>
<td>3.17</td>
<td>45.23</td>
<td>5.00</td>
<td>Belong/Low</td>
<td>Free</td>
<td>F</td>
<td>Hispanic</td>
</tr>
<tr>
<td>Kayla</td>
<td>8</td>
<td>2.17</td>
<td>39.33</td>
<td>4.60</td>
<td>Belong/Low</td>
<td>Free</td>
<td>F</td>
<td>Black</td>
</tr>
<tr>
<td>Lauren</td>
<td>7</td>
<td>2.61</td>
<td>26.82</td>
<td>4.60</td>
<td>Belong/Low</td>
<td>Free</td>
<td>F</td>
<td>Asian</td>
</tr>
</tbody>
</table>

Note: BL = Belong/Low, AL = Achieve/Low, BH = Belong/High, BL = Belong/Low
Participant’s characteristics. Twelve students were selected representing a sample of participants with Belonging High (BL), Belonging Low (BL), Achievement High (AH), and Achievement Low (AL). The following section describes the participants who were selected to be interviewed for the second, qualitative, phase of the study. Table 28 shows the demographic information, gender, and SES of the 12 selected participants. The initial interviews with the 12 selected participants were conducted over a 2-week period in locations determined by each participant. Initial interviews lasted a total of 176 minutes, approximately 3 hr from 8 min 38 sec to 26 min 19 sec with the average interview duration being 14 min 40 sec.

Follow-up interviews were conducted with 6 of the 12 participants. After transcribing the interview tapes, the researcher noted discrepancies between these six participants’ responses to the interview protocol questions and their responses to the PSSM survey instrument items. The other six original participants’ interview responses coincided with the manner in which each responded on the PSSM survey instrument. Therefore, the researcher felt it was necessary to seek clarification on the discrepancies between the participant’s original interview responses and their responses to the PSSM survey instrument items. The follow-up interviews with the six selected participants were conducted over a 1-week period at participant school sites. Follow-up interview lasted a total of 46 min 47 sec. The duration of the interviews ranged from 5 min 9 sec to 14 min 32 sec with the average follow-up interview lasting approximately 4 min 48 sec.

Interview locations, durations, and an indication of follow-up interviews and duration are noted in Table 29. Interview durations varied depending on the responses of
participants. While some participants provided quite a bit of information during the ice-breaker questions, others responded to the questions succinctly without elaboration.

Table 29

*Participant Interview Locations and Durations*

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Duration (minutes)</th>
<th>Follow-up</th>
<th>Location</th>
<th>Duration (minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Alexis</td>
<td>Starbuck’s</td>
<td>26 min 19sec</td>
<td>Yes</td>
<td>Participant’s school</td>
<td>5 min 38 sec</td>
</tr>
<tr>
<td>2 Barbara</td>
<td>Participant’s home</td>
<td>14 min 10 sec</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Cassidy</td>
<td>Starbuck’s</td>
<td>9 min 17 sec</td>
<td>No</td>
<td>Participant’s school</td>
<td>14 min 32 sec</td>
</tr>
<tr>
<td>4 Danielle</td>
<td>Participant’s home</td>
<td>11 min 58 sec</td>
<td>Yes</td>
<td>Participant’s school</td>
<td></td>
</tr>
<tr>
<td>5 Elizabeth</td>
<td>Participant’s school</td>
<td>11 min 51 sec</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Faith</td>
<td>Participant’s home</td>
<td>23 min 49 sec</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Garrett</td>
<td>Participant’s home</td>
<td>12 min 49 sec</td>
<td>Yes</td>
<td>Participant’s school</td>
<td>5 min 9 sec</td>
</tr>
<tr>
<td>8 Hunter</td>
<td>Mall</td>
<td>8 min 38 sec</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Ingrid</td>
<td>Library</td>
<td>14 min 58 sec</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Jennifer</td>
<td>Library</td>
<td>15 min 31 sec</td>
<td>Yes</td>
<td>Participant’s school</td>
<td>6 min 25 sec</td>
</tr>
<tr>
<td>11 Kayla</td>
<td>Library</td>
<td>12 min 57 sec</td>
<td>Yes</td>
<td>Participant’s school</td>
<td>9 min 20 sec</td>
</tr>
<tr>
<td>12 Lauren</td>
<td>Library</td>
<td>13 min 43 sec</td>
<td>Yes</td>
<td>Participant’s school</td>
<td>5 min 43 sec</td>
</tr>
</tbody>
</table>
**Alexis.** Alexis (BL, AL) was a shy, soft-spoken seventh grade White girl who described herself as an athlete. She transferred to her new school at the beginning of seventh grade as a result of company relocation for her father’s job. She had only one other school in another North American country. Alexis paid for her lunch. During the interview, she often looked to her mother for reassurance with answers or for the correct way to phrase her response during the interview. She lived with both parents and an older brother. Her eldest brother attended college and did not make the transition to the suburban community with the family. She enjoyed sports and played basketball for her new middle school. Alexis’ transition was further intensified by a corresponding change in cultures. Alexis was selected for a follow-up interview to explore factors which impacted her achieving a low belonging score and a low academic achievement score.

**Barbara.** Barbara (BH, AH) was a bubbly seventh grade girl with a bright smile whose family’s country of origin was India. She transferred to her new school in January of her sixth-grade year. She had attended three other schools in her academic career. She had previously lived in the South for approximately 3 ½ years before moving to the North. She lived with both parents who were scientists at a local university and a younger brother who loved video games. The relocation was a result of both parents accepting new positions at a local university. Barbara paid for her lunch. Her interests included reading fantasy books and competing on her middle school’s math team. Additionally, she participated in the school band where she played the clarinet. Barbara was returning to the South after living up North for over 8 years. Due to her minority status, she was se-
lected for a follow-up interview to explore factors which impacted her achieving a high belonging score and a high academic achievement score.

*Cassidy.* Cassidy (BH, AH) was a self-confident White eighth grader who appeared to be comfortable interacting with adults. She transferred to her new school at the beginning of her eighth grade year as a result of company relocation for her father’s job. Cassidy paid for her lunch. She had attended three other schools previously and had participated in the Gifted and Talented program in her previous school. She also enjoyed athletics and had two older sisters who attended college in her home state. She lived with her stay-at-home mother and father and was enjoying the life of “the only child.” Cassidy felt that her new school environment was very similar to the school she attended in her previous state.

*Danielle.* Danielle (BL, AH) is the older of two children in her close-knit White family. She transferred to her new school in January of her seventh grade year after she and her family relocated for the academic and athletic opportunities in the new school district. She had attended two other schools in her short academic career. Danielle paid for her lunch. The interview was conducted with the entire family present. She was in the seventh grade at her new middle school. Although she enjoyed all sports, due to the timing of her transition (January), she was unable to participate on any school sponsored athletic teams. She played softball and was an avid fan of one of the state’s prominent universities. Her family and church were an important aspect of her life. Soon after her transition, Danielle indicated that she felt as if she had been at her new school all along. Da-
nielle was selected for a follow-up interview to explore factors which impacted her achieving a low belonging score while still maintaining a high academic achievement score.

Elizabeth. Elizabeth (BH, AH) was a Black seventh grader and the oldest of four children in her family. She transferred to her new middle school at the beginning of her sixth grade year from a private Catholic school. She had previously attended three other schools including one in another country. She lived with her mother and father within walking distance to the school. Elizabeth paid for her lunch. She was an avid reader who believed in the power of words. Her current school was the first public school she had attended. Her interests included cooking, playing tennis and spending time with her “loud and playful” family. Elizabeth indicated that she felt more similar to the students at her new school than different from them.

Faith. Faith (BH, AH) was a bright, bubbly “half-Hispanic” seventh grader who loved her new middle school. She transferred to her new middle school at the beginning of her seventh grade year as she and her mother settled into their new home. This was her fifth new school. She had already attended two other area middle schools in sixth grade. Faith paid for her lunch. She was described by her mother as sweet with a heart for society and a pure humanitarian. Due to her parents’ divorce, she was a bi-coastal child who spent the school year with her mother and all vacations with her father in another state. She had strong connections to her extended family on both sides. As the oldest girl cousin in the family, she particularly enjoyed her vacation times with her father due to the time
she also was also allowed to spend with her cousins. She loved dancing, animals and writing short stories. Faith indicated that she moved a lot but that her current school was the best school she had ever been to. Faith transferred from a smaller suburban school in a neighboring district.

Garrett. Garrett (BL, AH) was a reserved Black eighth grader who smiled throughout the interview. He entered his new school as an eighth grader following relocation with his mother and brother from another less affluent suburban area. Garrett received free lunch at his school. This was his sixth new school and his fourth middle school. He was the oldest child in the home headed by his mother but had one younger brother who lived in the well-decorated apartment and two older sisters who were away in college. He had a range of interests including swimming, skating, playing football, watching scary movies and reading mystery books. He responded to all of his questions with a slight smile on his face that made it difficult to tell if he was telling the truth or was afraid to speak frankly as his brother and friend looked on. Garrett had attended several schools in his short academic career including one urban school. As a minority male, Garrett was selected for a follow-up interview to explore factors which impacted his achieving a low belonging score while still maintaining a high academic achievement score.

Hunter. Hunter (BH, AL) lived with his mother and younger brother. He began this new middle school in sixth grade following relocation with his mother and brother from another state. This was his fourth new school. Hunter received free lunch at his
school. He was a Black seventh grader who participated in football and track at his new middle school. His events for track included shot put and discus throw. He and his close knit family enjoyed watching movies together and taking short trips to different places. Hunter felt that his previous school in another state was very similar to his new middle school. As a minority male, Hunter was selected for a follow-up interview to explore factors which impacted his achieving a high belonging score but earning a low academic achievement score.

Ingrid. Ingrid (BH, AL) was a well-dressed White seventh grader who appeared comfortable when speaking with the researcher. Ingrid began attending this school as a seventh grader following a transfer from a local Catholic school. She had attended two other schools. Ingrid paid for her lunch. She described herself as outgoing. She played volleyball and spoke of her teammates throughout the interview. She lived with her mother, father and brother but maintained a close relationship with and spent time with her aunts, cousins and grandparents in nearby cities. She admitted that she and her brother did not get along as well as they should but that she loved him. Ingrid believed that her transition to her new school was facilitated by having relatives who already attended the school.

Jennifer. Jennifer (BL, AL) was a Mexican seventh grade student at her new school. She began attending this new school as a sixth grader following relocation from a neighboring state. The family’s relocation was to allow her mother to have a much needed surgery at a lower price while being surround by family. She had previously at-
tended three other schools. Jennifer received free lunch. She lived with her mother, father
and two younger sisters in an area apartment. She reluctantly moved to Alabama with her
family to enable her mother to have a much needed surgery at a local hospital. She en-
joyed spending time with her cousins who also attended her new school. Although Jenni-
fer stated that she was not ready for her new school, with the help of her teachers whom
she felt were welcoming, she had gotten used to the new school. As a minority, Jennifer
was selected for a follow-up interview to explore factors which impacted her achieving a
low belonging score and a low academic achievement score.

Kayla. Kayla (BL, AL) was a Black, well-groomed, soft-spoken young lady who
lived with her mother and younger sister. She transferred to this new middle school as a
seventh grader. Kayla received free lunch. She had attended four other schools. She had
been a resident of Alabama her entire life. She was now an eighth grade student who said
it was a joint decision by her and her mother to transfer to the new school in search of
better educational opportunities. Kayla felt that her new school was a good school where
she could be herself. Kayla transferred from an urban inner-city school. As a minority
student, Kayla was selected for a follow-up interview to explore factors which impacted
her achieving a low belonging score and a low academic achievement score.

Lauren. Lauren (BL, AL) was a shy Hmong, seventh grade student who lived
with her father, mother and older brother. Her family’s country of origin was Laos. She
began attending her new middle school as a sixth grader following relocation from a
small rural community. Lauren received free lunch. This school was the third school she
had attended. She was the youngest in the family with one older sister and two additional older brothers. She enjoyed getting on the computer and texting to her sister and friend. She spoke very highly of her father who she described as “very good with work….very talented…..and very smart.” Although Lauren cried the first day of school, she felt the teachers were nice at her new school. Lauren transferred from a small “country” school. As a minority student, Lauren was selected for a follow-up interview to explore factors which impacted her achieving a low belonging score and a low academic achievement score.

Themes and corresponding codes. To answer the research questions for the qualitative phase: “How do the factors identified as significant/non-significant by path analysis in the first, quantitative, phase influence academic achievement of seventh-grade and eighth-grade transfer students with low and high sense of belonging scores?” and “What other factors besides those explored in the quantitative phase influence academic achievement of seventh-grade and eighth-grade transfer students? the interviews of each participant were analyzed for codes and themes. Three persistent themes emerged as a result of this analysis: similarity to previous school, involvement in new school and process of transition to new school. Table 30 displays the themes/sub-themes and codes developed from this analysis.
Table 30

Themes and Codes from Participants Interviewed in the Qualitative Phase

<table>
<thead>
<tr>
<th>Themes</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Similarity to previous school</td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>Larger</td>
</tr>
<tr>
<td></td>
<td>“Smaller version of current school”</td>
</tr>
<tr>
<td>Configuration</td>
<td>From one classroom to many classrooms</td>
</tr>
<tr>
<td></td>
<td>Pre-kindergarten to 8th grade</td>
</tr>
<tr>
<td>Environment</td>
<td>Used to same people and community</td>
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<tr>
<td></td>
<td>Cliques established</td>
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<tr>
<td></td>
<td>Different racial make-up</td>
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<tr>
<td></td>
<td>Private to public school setting</td>
</tr>
<tr>
<td>Academic preparation</td>
<td>No advanced classes in previous school</td>
</tr>
<tr>
<td></td>
<td>Bigger homework load</td>
</tr>
<tr>
<td></td>
<td>“New school was more difficult”</td>
</tr>
<tr>
<td></td>
<td>“On a different level”</td>
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<tr>
<td></td>
<td>Had to “step it up”</td>
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<tr>
<td>Involvement in new school</td>
<td></td>
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<tr>
<td>Extracurricular</td>
<td></td>
</tr>
<tr>
<td>Academic</td>
<td>Math Team</td>
</tr>
<tr>
<td>Athletic</td>
<td>Sports beginning before school term</td>
</tr>
<tr>
<td></td>
<td>Activities with later starts</td>
</tr>
<tr>
<td></td>
<td>Unable to participate</td>
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<tr>
<td>Student Personality</td>
<td>Outgoing</td>
</tr>
<tr>
<td></td>
<td>Shy</td>
</tr>
<tr>
<td>Process of Transition to New School</td>
<td></td>
</tr>
<tr>
<td>Outlook toward transition</td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>Made decision with mom to move</td>
</tr>
<tr>
<td>Negative</td>
<td>Left familiar peers</td>
</tr>
<tr>
<td></td>
<td>“Didn’t want to come”</td>
</tr>
<tr>
<td></td>
<td>“I move a lot.”</td>
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<tr>
<td></td>
<td>Been to several schools</td>
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<tr>
<td>Accustomed to moving</td>
<td></td>
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<tr>
<td>Time of transition</td>
<td>False assumptions</td>
</tr>
<tr>
<td></td>
<td>“Hard to fit in”</td>
</tr>
<tr>
<td>Transitional Support</td>
<td></td>
</tr>
<tr>
<td>Relationship with teachers</td>
<td>Wanted you to feel welcomed</td>
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<tr>
<td></td>
<td>Supportive</td>
</tr>
<tr>
<td></td>
<td>Cared more</td>
</tr>
<tr>
<td></td>
<td>Others received more help</td>
</tr>
<tr>
<td>Relationship with peers</td>
<td>Welcoming</td>
</tr>
<tr>
<td></td>
<td>Felt different from peers</td>
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<tr>
<td></td>
<td>No supportive group</td>
</tr>
<tr>
<td></td>
<td>Felt judged</td>
</tr>
<tr>
<td></td>
<td>Not a lot in common</td>
</tr>
<tr>
<td></td>
<td>No one picked on me</td>
</tr>
<tr>
<td>Family support</td>
<td>Parents involved</td>
</tr>
</tbody>
</table>

Note: Codes listed in quotations represent the actual words of interview participants.
Similarity to previous school. As the interview explored factors which might have influenced the participants’ achievement following their transfer to an affluent middle school, a theme of similarity to previous school developed with four sub-themes: size of school, configuration of school, environment of school, and students’ academic preparation. This theme was addressed by students with both low and high belonging scores.

Size

Interview participants were asked to describe their previous school, how their previous school was like or different from their current school, and how similar or different they felt to other students at their new school. Similarity to the previous school was closely related to a higher sense of belonging for some of the participants. Three of the participants interviewed indicated that their new affluent suburban middle school was similar to the previous school each attended. These three students also had a high belonging score. For example, Cassidy (BH, AH) explained that aside from her new school being larger; there were no major differences in the people at her new school when compared to her old school. In fact, she said, “there are a lot of people that remind me of my friends in [previous state],” indicating that she felt comfortable in her new middle school surroundings even though she entered as an eighth-grade student. Faith’s (BH, AH) previous school was also very similar to her new school although somewhat smaller. Hunter (BH, AL) expressed the similarity to his new suburban school best when he said his previous school was simply “a smaller version of [current school name].” The researcher found this to be interesting given that Hunter’s previous school was an elementary school. Unlike Cassidy and Faith, Hunter’s academic achievement score was low despite
the similarity to his previous school and his high belonging score. When justifying his lower academic achievement score, Hunter simply stated that his previous school was easier.

*Configuration*

Of the nine remaining students who did not indicate a significant similarity between their previous school and their current affluent suburban middle school, six had a low belonging score. These students spoke of experiencing an extreme change in their learning environments ranging from number of students in the school to type of school configuration to the attitude towards learning in their new school environment which are believed to have contributed to their lower belonging scores. For example, Alexis (BL, AL), who seems to have experienced the biggest change in school environments by coming from another country, was accustomed to spending the entire day with the same group of students in one classroom to which the teachers rotated. Consequently, Alexis said, “trying to get to my classes was hard.” Additionally, Alexis’ previous school configuration was pre-kindergarten to eighth grade with only approximately 500 students. She was now enrolled in a suburban middle school with over 1,200 students. Alexis’ PSSM survey response indicated that she felt it was difficult for people like her to be accepted at her current school. When asked to describe why she felt this way, Alexis commented, “I was still trying to get used to the culture here, so I didn’t really want to belong.” She went on to say that she felt different from the other students at her new school because she talked different from the other students.
Environment

Danielle (BL, AH) came from a much smaller school as well but it did have a traditional middle school configuration. To prepare the students for their new middle school experience at her previous school, the teachers in fifth grade helped transition the students into middle school routines. When asked to explain her struggle to belong as indicated by her response of very true on the PSSM, Danielle commented, “I’ve grown up and been raised in the exact same community and knew everybody.” Therefore, the transition to her new suburban school was hard because in her new school she did not know anyone. Danielle expressed her difficulty with feeling like she belonged in her new school when she said, “It is hard for people like me to be accepted here because everybody already has their cliques.”

Jennifer (BL, AL) shared a similar view to Danielle regarding the loss of friends she had known her entire life. Jennifer expressed this most simply when she said, “I have lived there my whole life and then I come here about two years ago.” Additionally, her previous school was mostly Mexican whereas her new school was predominantly White. Her survey responses indicated that it was hard for “people like me” to be accepted in her new school. When probed about what “people like me” means to her, Danielle shared “maybe like the people like my race.” She went on to say, “It’s hard for people like me to be accepted here because people judge you based on your race and people talk bad about your race.” To Danielle who moved to her new school from another state, the people who belong in her new school were students who had “lived here in Alabama for a long time….because they had the same classmates for a long time…they already had their groups and stuff.”
The three exceptions for students who did not indicate any similarity between their new affluent middle school and their previous school yet still achieved a high belonging score, were three female participants: Barbara (BH, AH), Elizabeth (BH, AH), and Ingrid (BH, AL). When reviewing their survey and interview responses, the researcher noted that two of the three students, Elizabeth and Ingrid, had attended private schools with similar standards but different environments when compared to their new public settings. For example, Ingrid stated, “we would have to go to church on like Fridays…wear those uniforms…were not allowed to wear make-up, jewelry or none of that stuff.” The third participant, Barbara, whose school was not similar to her new affluent middle school still achieved a high belonging score. Upon arrival at the new school, she became heavily involved with an academic team which she felt contributed to her sense of belonging despite the differences from her previous school.

**Academic preparation**

Participants were also asked to discuss their academic performance at their new school, the academic differences between their old and new school and whether they felt academically prepared for their new suburban school environment. The participant responses fell into three categories. Five felt that their preparation was good, three felt that their preparation was not adequate and the remaining four simply indicated that they had to work harder in their new school environment. Being academically prepared seems to have impacted belonging scores favorably with one exception. Barbara (BH, AH) stated that her studies in her previous school, in another state, were harder but that there were no advanced studies, such as Advanced Math in her previous school. Cassidy (BH, AH) was
involved in the Gifted and Talented program in her home state which was not available in her new school. Therefore, she felt prepared for the work presented to her at her new affluent middle school. Elizabeth (BH, AH) stated that she knew some of the material in her new school and other material she found challenging. Ingrid (BH, AL) was the only participant who felt that she was academically prepared but had an academic achievement score below the mean ($M = 50.09$). She stated that her previous school graded harder than her current school. She explained that at her previous school a score of 93-100 was an A as opposed to a 90-100 in her new school. Her low academic achievement score could be in part due to her ADD and Dyslexia but she stated that the teachers helped her a lot. Danielle (BL, AH) also said that the academic expectations were the same in her new suburban school as in her previous school. Even though her belonging score was low, she indicated that the academics were similar when she stated, “We were doing pretty much the exact same things at my old school.” Because she was the exception with a low belonging score despite similar academics, the researcher asked Danielle “Who does belong at the school?” She stated, “Everybody should be able to belong but it doesn’t feel that way because you’ve got the really smart people that none of the cheerleaders want to hang with.”

The majority of the participants who did not feel adequately prepared also achieved a low belonging score. Alexis (BL, AL) stated that because she was from a different country, she struggled with a very unfamiliar course, Civics. She also indicated that the tests were harder and the homework load was harder in her new school when compared to her previous school. Her struggles with academics were reflected in her low belonging score. Garrett (BL, AH) did not feel that he was prepared academically for his
new school but his academic performance got better because he had more help from teachers at his new suburban school than in his previous school.

Jennifer (BL, AL) did not feel academically prepared for her new school at all. She stated that the new school was more difficult with different math and was difficult to understand. Her difficulties may have been a result of her being designated an ESL (English Second Language) learner. Kayla (BL, AL) felt like she was prepared for her new school but she had anticipated being behind the other students due to coming from an inner-city school setting. Kayla expressed this best when she stated, “They [new school] were like on another level to me like I didn’t know none of it but I caught up on it quick.” Lauren (BL, AL) stated she felt prepared but that her previous school did not have homework or textbooks for students. She indicated that she felt different from her peers because she experienced difficulty catching on to new topics. The belonging score for the majority of each of the students who felt they were not adequately prepared or who had to work harder was low.

Faith (BH, AH), who stated that her new school was “on a different level” academically “requiring more thinking” said she got better grades because her teachers spent more time on concepts. On the other hand, Hunter (BH, AL), who stated that although the work was easier at his previous school, said that he felt prepared for his new school, although he did not achieve to a high level. In his words, he soon realized he had to “step it up” to achieve in his new school. Hunter stated that he had to study harder in his new school. He expressed best how he knew things were different when he stated, “They give homework here on the weekends and expect it to be done.”
In summary, new affluent middle school similarity to previous school setting developed as a recurring theme by the interview participants as a factor that impacted their sense of belonging and academic achievement. Although most participants reported that their new affluent school setting was not similar in size to their previous school setting, when the configuration, school environment and previous academic preparation were similar, the participants had a high belonging score. Exceptions related to similarity to previous school were obtained in belonging scores for students who transferred from a private school setting or who immediately became involved in school extracurricular activities. Students who experienced an extreme social change including a change in dominant culture, racial configuration or peer groups did not achieve high belonging scores and in most cases this led to lower academic achievement. Participants who indicated that they felt academically prepared by their previous school setting also had a high sense of belonging. This factor did not always correlate to a high academic achievement score for each student.

**Involvement in new school.** A second theme that developed as a factor which might have influenced the participants’ achievement following their transfer to an affluent middle school was involvement in their new school. Two sub-themes related to involvement in their new school pertained to extracurricular activities and student personality.
**Extracurricular activities**

In response to prompts requesting that the participant tell the researcher about themselves and what makes them feel a part/not a part of their new school, half of the participants described their involvement in school sponsored activities. Four of the five students who spoke of their involvement in their new school achieved a high belonging score. Barbara (BH, AH) got involved by joining an academic team (Math Team) upon arrival in January at her new school. Being a part of the Math Team and being recognized for her grades helped Barbara feel more a part of her new school. Cassidy (BH, AH), Garrett (BL, AH), Hunter (BH, AL), and Ingrid (BH, AL) all had the opportunity to try out for sports that began practices prior to the opening of the school year. Consequently, each had the advantage of knowing some of their new classmates from the new suburban school prior to the first day of classes which contributed to their high sense of belonging. Cassidy (BH, AH) tried out for volleyball and found that she met people through volleyball. Cassidy explained this advantage best when she stated, “I knew like people in my classes and stuff and that way I wasn’t like completely alone and I had like people to sit with at lunch.” Hunter (BH, AL) played football and threw the discus and shot put for his new school. Ingrid (BH, AL) also played volleyball. Both Hunter and Ingrid stated that they felt like a part of their new school due to their involvement with sports.

Alexis (BL, AL) and Danielle (BL, AH) also became involved in activities at their new school. However, each still had a low belonging score. Although involvement in extracurricular activities proved to be an important factor in achieving a higher belonging score for others, the activities that these two participants were involved in held try-outs
later in the school year; consequently, their participation did not help with their initial sense of belonging at the new school. Alexis admitted that when she became involved in basketball at her new school, she liked the new school more. Danielle (BL, AH), who also had a low belonging score, did not make her new school’s softball team but continued to try other activities until she made her new school’s Show Choir. Both softball and Show Choir were activities in the second semester of the school year with Show Choir auditions being held in May for the upcoming school year. She indicated that making the Show Choir helped her feel like she was a part of her new school. In addition to Alexis and Danielle, Garrett (BL, AH) also had a low belonging score despite his involvement in football. Garrett indicated that being shy was a barrier to having a high sense of belonging. He expressed this best when he stated, “I was just shy and didn’t want to talk to nobody for real.”

The other interview participants did not mention involvement in any specific extracurricular activities – athletic or academic. Of these, three students had low belonging scores and also had low academic achievement scores. Jennifer (BL, AL) and Kayla (BL, AL) both indicated a desire to join extracurricular activities however, one found that track was too expensive and the other ran into obstacles when she tried to clarify the status of her school physical in order to try out for both softball and volleyball. One student, Lauren (BL, AL), though she herself was not involved in any activities, encouraged new students to get involved with their new school. In the closing remarks of her interview, Lauren stated, “I recommend that students get involved in more activities.” The two exceptions to students who did not indicate any involvement in extracurricular activities yet still achieved a high belonging score, were the two participants who also had a high aca-
demic achievement score paired with the high belonging score: Elizabeth (BH, AH) and Faith (BH, AH).

**Student personality**

Student personality emerged as a theme with interview participants contributing to the student’s sense of belonging in their new affluent middle school surroundings. Several of the participants appeared to be or described themselves as outgoing or shy. Of the four students who were outgoing in their new school environment (Barbara (BH, AH), Cassidy (BH, AH), Faith (BH, AH), and Ingrid (BH, AL)), all four achieved a high sense of belonging score. Additionally, three of the four had a high academic achievement. Ingrid (BH, AL), who described herself as outgoing, discussed her disabilities of ADD and Dyslexia when referring to her lower achievement during the interview. Five of the remaining eight interview participants appeared shy during the interview or described themselves in this manner to the researcher. Each of these five (Alexis (BL, AL), Danielle, (BL, AH), Garrett (BL, AH), Jennifer (BL, AL) and Lauren (BL, AL)) also had a low sense of belonging. Garrett admitted that his shyness was a barrier in his new school setting. He commented, “I was just shy and didn’t want to talk to nobody for real.” Jennifer shared that she was a shy person in the beginning but “when you get to know me, I’m really outgoing.” Lauren, who did not feel as committed to sports as everyone else in her new school, stated that she is really shy. This prevented her from getting involved because as she stated, “I don’t have the nerve to join groups.”

In summary, almost half of the students interviewed indicated involvement in extracurricular activities including sports teams, academic teams and fine arts programs.
Even a student who was not involved in activities recommended that other students get involved at their new school to help with their transition. Of those who discussed their involvement in school activities, all but one achieved a high sense of belonging. Students who did not get involved cited the expense and other obstacles which prevented their involvement. Three students who were also not involved not only achieved a high sense of belonging score but also had a high academic achievement score. Involvement in school activities also seemed to be linked to the personality of the student. Students who thought of themselves as outgoing had high sense of belonging scores whereas students who described themselves as shy had low sense of belonging scores.

Process of transition to new school. The final theme that emerged as the interviewer explored factors which might have influenced the participants’ achievement following their transfer to an affluent middle school was process of transition to new school. This theme was addressed by students with both low and high belonging scores. Subthemes related to this theme included outlook on transition, time of transition, and transitional support.

Outlook towards transition

In describing their transition/transfer experience, several participants made reference to how they felt about the move from their old school to the new suburban school. Nine of the participants did not specifically indicate a preference for or against their move to the new school. One of the nine, Kayla (BL, AL), who had a low sense of belonging, had helped make the decision with her mother to leave her previous school in
order to attend the suburban school. Therefore, although she did not explicitly express her attitude toward the transition, the researcher assumed she was in favor of the move.

Danielle (BL, AH), on the other hand, indicated that she had been with the same children since kindergarten in her previous school. Leaving these peers seemed to negatively impact her attitude towards the transition. She found it difficult to get to know students in her new school particularly since she entered in January of the school year. Danielle stated, “I felt like I didn’t belong because I had always been and grown up and raised in the exact same community and knew everybody. And then I come here and I know nobody …” Three other participants expressed a negative attitude towards the move to their new school. Each of these participants had a low belonging and a low academic achievement score. Alexis (BL, AL), who was nervous her first day of school, simply stated that she “didn’t want to go.” She pleaded with her parents for weeks after school started to take her back to her old school in her familiar country of origin. Jennifer (BL, AL) also had strong feelings about her transition to her new suburban school. She plainly stated, “I didn’t want to come.” She favored her old school mostly because the other students were of the same race. Lauren (BL, AL), who cried on her first day of school, also missed her former school where she had known everyone a long time.

Faith (BH, AH), who stated that she moved a lot, achieved a high belonging and academic achievement scores. Despite moving a lot, Faith felt that her current affluent suburban middle school was the best school she had attended. Garrett (BL, AH) who had a low belonging score had attended several different schools. In fact, Garrett (BL, AH) had attended three middle schools in sixth grade and his current school was his fourth in less than 3 years. Transition seemed to be a way of life for Garrett. When probed, Gar-
rett admitted that he “would like to be in a school where people were more like me.” He stated that his new classmates like to hunt, fish and play baseball which were activities that he did not engage in.

*Time of transition*

When asked to discuss their transition/transfer to their new school, all of the students made reference to the time of their arrival. Some moved over the summer and entered at the beginning of the school year. Others transitioned after school had started for everyone else. One participant, Jennifer (BL, AL), arrived at her new school two months before the end of the school year. Seven of the twelve students interviewed transitioned over the summer and began the school year with their peers at the new school. The sense of belonging score for these seven participants varied. Although they began the school year with the other students, Alexis (BL, AL), Faith (BH, AH) and Kayla (BL, AL) began as seventh graders or eighth-graders that often made other individuals in the school (teachers and students) falsely assume they were familiar with the school’s routines including things like where to sit on the bus and where classes were located. Alexis (BL, AL) expressed this type of assumption best when she said,

I was alone and it was just packed [the bus]. I couldn’t find anywhere to sit. And on our bus, we have sections and I didn’t know so I sat in the 6th grade section right at the front. So they all thought I was 6th grade.

Because Faith (BH, AH) spent every summer in another state, when she returned for school she found that she had missed school orientation prior to school opening. This is typically the time that sixth-grade students and new students get critical information about their new school and its set-up. Not only had Faith missed orientation to the
school, she had never seen the school until the first day of studies. Although Cassidy (BH, AH) and Ingrid (BH, AL) also transitioned as upper classmen at the beginning of the school year, they had the additional benefit of having volleyball teammates to show them around the school.

Elizabeth (BH, AH), Hunter (BH, AL) and Lauren (BL, AL) also transitioned at the beginning of the year, but as sixth-graders; therefore, even as transfer students, these participants were involved in the usual first day of middle school transition activities like their sixth-grade peers such as tours and information on how to open their locker and access their lunch account. Transitioning at the beginning of the year did not prove beneficial to the belonging scores of Alexis (BL, AL), Kayla (BL, AL) and Lauren (BL, AL). Because her PSSM response indicated that Alexis wished to be in a different school, she admitted in her follow-up interviews that she would like to be in a smaller school setting rather than in her new affluent middle school setting. Kayla stated that she did not feel comfortable in the new school setting. She commented,

I really didn’t feel like I was a party of my new school because I didn’t get that much attention, I didn’t feel comfortable at all. I didn’t talk to people. They didn’t bother and didn’t come and say “Hey what’s your name” or nothing like that.

Lauren indicated that she would like to be in an easier school. She said, “All the classes I go to, it’s hard for me to concentrate because everybody knows how to do it and understand.”

Barbara (BH, AH), Danielle (BL, AH), Garrett (BL, AH) and Jennifer (BL, AL) all entered their new suburban school during the school year. Entering during the school year impacted belonging scores negatively for three of the four participants. Barbara (BH, AH) entered as a sixth grader after Christmas holidays where she admitted it was “pretty
hard to fit in with everybody.” Even though she entered after the initial start of school, her high belonging score could be attributed to her immediate involvement in an academic team – Math Team. Danielle (BL, AH) started at her new school in January also. She clearly stated in her follow-up interview that it was difficult because “everybody already has their cliques.” She gave this as the reason for her answering with a score close to not true at all when asked about feeling a part of her new suburban school. Garrett (BL, AH) entered during his eighth-grade year and was shown by students where his classes were located. Again, he felt as if his shyness contributed to his low sense of belonging. He commented that he “would like to be in a school where people are more like me.” When asked how the students would be, he indicated that they would “be loud and do the stuff I like to do…like in [previous school].”

Jennifer (BL, AL) came to her new school at the end of sixth grade with approximately 2 months of school left. Although peer assistants were assigned to help her, she felt like she was on her own to find her way around her new school. She indicated that she felt ignored even by the peer assistants assigned to her. This fact influenced her response of not true at all on her PSSM when asked if she felt like she was treated with respect. She indicated that her level of respect was different from the way she saw another new student treated just 2-weeks later. Danielle shared,

Like two weeks later this new girl came, and like the peers helped her out a lot and they were like best friends and they would talk all the time, but with me they didn’t help me out at all….she was White and I’m Mexican.

This experience obviously had a huge impact on how Danielle felt in her new school. She continued to speak about this experience when she offered advice on what could be done to help a new student. She felt it was very important to have helpful peer
helpers who take you and show you around instead of simply pointing you in the direction of the requested room.

*Transitional support*

Several prompts elicited comments about the student’s relationship with their teachers, peers and family. Participants were asked to describe how they were accepted by teachers, if their teachers were welcoming initially and how they were treated by the teachers. All of the participants, those with low belonging scores and those with high belonging scores, indicated that their relationship with their new teachers had a positive impact on how they felt in their new school environment. Alexis (BL, AL) felt supported by the teachers in her new school. She went on to say that the teachers “wanted to make you feel welcome.” This teacher support did not however, positively affect her belonging score. Cassidy (BH, AH), Danielle (BL, AH) and Ingrid (BH, AL) stated that they felt like they were accepted by their teachers first, then later by the other students. Additionally, Faith (BH, AH) stated that teachers were available in the mornings to help with homework or to help students study for tests. Faith explained,

> I get better grades here [new school] because the teachers really explain it instead of spending just like one day on one thing and a bunch of different things and having a test on all those things after like two weeks.

She felt the teachers were most welcoming initially because that was who she met first. She spoke of how some of her teachers indicated that they were new to the school too. To Faith this meant they understood how she was feeling in her new school environment.
Garrett (BL, AH) thought it was “cool” that one of his teachers talked to him on Facebook. Additionally, according to Garrett, the teachers accept you for who you are. Garrett also added that the administrators help you “stay out of trouble” by giving “pep talks about how good of people we were and how much they loved us.” He went on to say that the “teachers at [his new school] act like they cared more.” Jennifer (BL, AL) added that her teachers too were really nice and were most welcoming since she did not have any friends. She stated that the teachers “help you out a lot like if you need help they tell me or they tell my ESL teacher to help me out with things that I have problems with.” Jennifer added that the teachers did not judge you like the kids in the school do. Lauren (BL, AL) also felt that the teachers at her new school were approachable. She indicated that in the past she struggled when she started a new school; however, the teachers in her new suburban school worked with her to make the work easier to understand.

Kayla (BL, AL) felt that her teachers helped her out more at her new school than her previous school. However, when probed for more information in the follow-up interview, Kayla added, “I didn’t feel like my teachers were interested in me because I didn’t get enough help from them.” She added that it seemed to her that the students who already knew everything were the ones getting help from the teachers. Kayla felt that other students received more help than she did. It also seemed that Kayla felt singled out in a negative way by her teachers. This was evident when she stated,

I also got in trouble for everything and teachers like say something to me about everything I have on or something like that when it was like in dress code. Like other students would have something on that was out of dress code and they wouldn’t say nothing to them.
When Kayla was asked what the difference was between her and the other students who did not seem to get into trouble, she stated that they had been at the school longer than her. Kayla’s PSSM response indicated that she did not feel proud about being at her new school. When asked to elaborate on why, she stated, “They treat people different when they should treat us the same both teachers and students.”

In describing their transition most of the participants indicated that not having friends initially was a factor in how they perceived the transition. Several prompts solicited information about whether the student felt accepted, welcomed and treated with respect by their peers. They were also asked if they felt like they could be themselves around their new peers. Each of the participants with a high belonging score also indicated a positive relationship with a peer group. Barbara (BH, AH) indicated that while she felt different from other students at her new school by favoring books and math, the students were still welcoming when she arrived at her new school. Cassidy (BH, AH) moved to her new community in the beginning of the summer but once she made friends after trying out for Volleyball, it made the beginning of school better since she knew people in her classes. Elizabeth (BH, AH) stated that she made friends the first day and that everybody was nice to her. Elizabeth added that she felt that at her new school the students were “accepted by their peers for who they are.”

Faith (BH, AH) indicated that she made more friends at her new school. She felt that she had a lot in common with her peers and had established good connections. Although she did indicate that she felt different from her peers who had attended [new school] since they were little. Additionally, Hunter (BH, AL) felt accepted by the students at his new school. Although he did not know any of the students at his new school
from meeting them in his neighborhood prior to school starting, he still indicated that he had a lot of friends. He explained that he had “learned how to understand the lessons more by talking to other students.” However, initially he too felt different because he did not attend the same elementary school as the rest of his friends. Ingrid (BH, AL) too spoke enthusiastically about her friends throughout the interview and loved her volleyball friends especially.

Each of the participants who struggled to find a peer group due to lack of desire, environmental difficulties, or his or her own shyness also had a low belonging score. Alexis (BL, AL) stated that initially, she wanted to go back home because she did not have any friends. This lack of a supportive peer group impacted her sense of belonging. Danielle (BL, AH) felt different because in her old school she “knew everybody and I knew where they came from and all their backgrounds and when I moved [to my new school] I didn’t know as many people.” In her follow-up interview, Danielle stated, “People were not friendly. The sports you play, how well you’re doing in school and where you live can make you feel differently.” In an effort to fit in, Danielle changed her appearance because she felt judged daily on her appearance. She stated “Every morning when I wake up really early, I’ll have to flat iron my hair and put on make-up and do the whole ordeal and make sure everything is perfect. Back home no one cared as much.” Danielle felt that things were much better now than when she started at the new affluent middle school initially. In her words, “I found the people that were like me. Now that I have my clique, I don’t feel as different from the other students.” Garrett (BL, AH) felt the students at his new school were friendly and helpful. Some helped with school work while others helped him find his classes when he first arrived. However, in his words,
“My shyness kept me from being a real part of [new school]. Additionally, he did not feel that he has a lot in common with the students in his new school.

Jennifer (BL, AL) admitted that her shyness contributed to her lack of friends in her new school. Even now, she stated that she only had one or two friends. She said she felt different from other students because she needed more assistance with her schoolwork than her peers. She went on to say that she really did not feel the same as the other students. She stated, “I wasn’t treated with as much respect as other students.” When asked for an example, she explained how the peer assistants assigned to help her find her way around wanted her to ask someone else. She added, “I was new and stuff and they didn’t help me out and they were supposed to because they’re peer assistants.” She ended her interview with words of wisdom for new students – “try to make friends on the first day because like if you don’t have any friends it’s going to be really, really hard because you are going to be all alone and stuff.” Lauren (BL, AL) struggled with her peers in her new school because she did not like being with large groups so it made it difficult for her to approach new people. This obviously impacted her sense of belonging. On the other hand, Kayla (BL, AL) liked her new school environment because at her old school there were always people picking on her. However, at the new school, she could be herself.

A third component to the transitional support for the seventh-grade and eighth-grade students who were new to their affluent middle school was the student’s family. The ice breaker questions at the beginning of the interview requested that the participant tell the researcher about their family. Seven of the 12 participants lived with both parents and five students came from households headed by single parents. Of the seven students
living with both parents, only three had a high belonging score. Therefore, the researcher did not consider caregiver status as a factor in sense of belonging. From initial and follow-up interviews, the researcher surmised that parental involvement and support during the transition impacted sense of belonging. Alexis (BL, AL) lived with both parents but had requested that her mother, who had been heavily involved in her previous school, allow her to manage this transition on her own. Faith (BH, AH), on the other hand, lived with her mother during the school year and her father during vacations and the summer. Despite their bi-coastal arrangement, it was evident in listening to Faith talk about both parents that each played a key role in her education, which seemed to impact her sense of belonging and achievement. Jennifer (BL, AL) lived with both parents and two younger siblings. However, her minority status seemed to have a greater impact on her sense of belonging. A language barrier between her parents and the school precluded their involvement in her transition thus leading to a low sense of belonging.

In summary, students’ outlook toward the transition garnered mixed results as a factor impacting sense of belonging for the transfer students. Kayla (BL, AL) who made the decision to move with her mother achieved a low belonging score. Several students indicated they wanted to go back to their previous school, to a place with familiar peers who would also be of the same race with the same interests. These students, Alexis (BL, AL), Danielle (BL, AH) and Jennifer (BL, AL) also had low sense of belonging scores. Students who excelled academically, had a strong sense of belonging or were accustomed to changing schools frequently had a better attitude towards their transition to their new school. In most cases, this resulted in a higher sense of belonging score. Time of transition (both time of year and grade level of change) impacted the adjustment of new stu-
dent. Student comments ranged from being alone on the first day to having sports peers to ease their transition. Those who transitioned later in the year found it difficult to find their way even with the help of peer assistants. Regardless of the time of the transition, support by teachers, peers and family seemed to have a positive impact on sense of belonging. All of the new students felt supported by their new teachers. They reported being accepted and in some cases helped more by their new teachers than the teachers at their previous school. However, contrary to the literature, a meaningful relationship with a teacher did not positively impact all participants’ belonging scores. Despite having a positive relationship with a teacher, students (e.g., Jennifer [BL, AL]) still had a low sense of belonging. The majority of the students had a supportive relationship with peers. Some made fast friends through extracurricular activities and others developed friendships as time went on. The four participants who indicated a difficult time with peer relationships also had a low belonging score. Not having friends impacted their feelings of acceptance by peers and therefore their sense of belonging.

Summary of the Qualitative Results

Although responses varied by participants, factors that could impact a student’s sense of belonging were brought out by these in-depth interviews. Three themes that can influence student belonging emerged based on in-depth interviews with 12 participants to answer the qualitative research central and subquestions. Similarity to previous school, involvement in new school, and process of transition to new school were found to impact student belonging in some manner. Similarity to previous school referred to the size of the school, the grade configuration of the school, the environment of the new school and
the student’s previous academic preparation. The study participants found the new suburban school to be larger but felt they were cared about more in their new school environment. While none of the participants came from a school similar in size, major changes in school configuration (i.e., one classroom to several classrooms), school environment (i.e., leaving all familiar friends or having a different racial make-up) along with inadequate academic preparation all negatively impacted student sense of belonging. Whereas switching from a private to public school environment and having a solid academic preparation for the affluent middle school positively impacted belonging for the interview participants.

Involvement in new school encompassed student involvement in extracurricular activities and opportunities impacted by student personality. Half of the students interviewed indicated involvement in extracurricular activities as a factor that helped to ease their transition. Interview participants, who became involved in their new school setting upon arrival, experienced a positive impact on their sense of belonging. Those who did not participate initially due to a late selection process for their activity, inadequate financial resources, incorrect information about activities or their own shyness all had low sense of belonging scores.

Process of transition to new school included the student’s outlook toward the transition, the time of the transition and the transitional support received in the new school setting. Students whose outlook towards the transition was negative experienced low belonging scores. Students who were accustomed to changing schools frequently had a better attitude towards their transition to their new school and experienced higher sense of belonging scores. The time of transition (both time of year and grade level at the time of
the change) impacted the adjustment of the new student; however, there was no link to
sense of belonging based on the time of a student’s transition. Times of transition only
seemed to impact the establishment of friendships since most cliques were already
formed and participation in some extracurricular activities that may have started in the
fall. Most of the students felt academically prepared and those who did not perform well
academically indicated that the content was either harder, on another level than their pre-
vious school or teacher expectations were higher requiring an adjustment on their part.
Inadequate preparation also led to a lower sense of belonging. All of the students felt
supported by their new teachers. However, this support did not have a notable and consist-
tent impact on sense of belonging for the interview participants. The majority of the stu-
dents had a supportive relationship with peers and those who did not felt that it impacted
their feelings of acceptance and therefore their sense of belonging. Family support,
whether by two parents or a single parent, emerged as an indicator of increased sense of
belonging for the interview participants.

Summary

Chapter 4 presents the results of the data collected and analyzed as described in
chapter 3. The results of the quantitative phase were obtained using univariate regression
analysis to summarize the relationship between the dependent variables of academic
achievement and belonging with several independent variables including achievement
motivation, SES, and ethnicity. Additionally, results from a structural equation model uti-
lizing path analysis were obtained to determine the correlation between and among the
variables. The results of the qualitative phase revealed several factors that could impact a
student’s sense of belonging including “similarity to previous school,” “involvement in new school,” and “process of transition to new school.”
CHAPTER 5
DISCUSSION AND SUMMARY OF THE STUDY
SUMMARY OF THE MAJOR FINDINGS

This study shed light on the aspects of a student’s environment that can impact their sense of belonging and thereby their academic achievement when transferring to an affluent middle school. The use of a mixed methods sequential explanatory designed allowed the researcher to analyze quantitative and qualitative data and thus investigate in depth the research problem of sense of belonging impacting achievement motivation and academic achievement for transfer students to affluent middle schools in the Southeast. The purpose of the first, quantitative, phase of this study was to analyze the impact of sense of belonging, selected demographic characteristics and achievement motivation on academic achievement for seventh-grade and eighth-grade students who transferred to affluent middle schools after the beginning of their sixth-grade year. The purpose of the second, qualitative, phase was to gain an in depth understanding of the factors revealed in the first, quantitative phase of the study which might influence a student’s sense of belonging and academic achievement in this study. The mixed methods explanatory sequential design was used to provide a better understanding of the research problem by extending and elaborating on the initial quantitative results. There was no known study that used mixed methods sequential explanatory design to obtain an understanding of the relationship between sense of belonging and achievement for middle school transfer students.
Quantitative Phase

In the quantitative phase, data from 168 participants was collected from six school sites in three school districts in the Southeast using two survey instruments and a participant demographic sheet. The researcher then identified significant statistical relationships using univariate regression analysis between the independent variables of sense of belonging, achievement motivation, ethnicity, gender, and socioeconomic status with the dependent variable of academic achievement. A statistically significant interaction between student sense of belonging and achievement motivation, free lunch status and Black ethnicity was found. Also, a statistically significant interaction was found between student academic achievement and belonging, free lunch status, Black ethnicity and Hispanic ethnicity.

Additionally, structural equation modeling, a multivariate analysis, was used in the first phase to allow the researcher to consider multiple variable combinations at the same time to determine the relationship between sense of belonging, achievement motivation and academic achievement and to determine if achievement motivation was an intervening factor on sense of belonging and academic achievement. The final model with the four fit indices within the acceptable range had three equations. Achievement was impacted positively by Belonging and negatively by Black ethnicity, Hispanic ethnicity and free lunch status. For each increment of a transfer student’s belonging score, there is a corresponding increase in the student’s academic achievement. The negative impact of Black ethnicity reveals that a Black student’s achievement score will be lower when compared to their White counterpart. The negative impact on Hispanic ethnicity indicates that a Hispanic student’s achievement will be lower compared to their White coun-
terpart. The negative impact on free lunch status indicates that a student who receives free lunch will have an achievement score that is lower than their paid lunch counterpart. A second equation in the model for Motivation indicates that a slight increase in Belonging score results in a corresponding small increase in a student’s Motivation score. The third and final Belonging equation indicates that a Black student’s belonging score will be lower when compared to their White counterpart. Additionally, a free lunch student’s Belonging score will be lower than a student who pays for their lunch.

There were no differences in a student’s sense of belonging when transferring to an affluent suburban middle school based on gender. However, the univariate analysis revealed that students experience a negative impact on their belonging scores when transferring to affluent middle schools if they are of low SES or are of Black ethnicity. Additionally, achievement motivation, as measured by mastery goal orientation, was shown to have a positive impact on student sense of belonging.

There were no differences in a student’s academic achievement based gender or on achievement motivation, as measured by mastery goal orientation. Additional findings show that there is a negative impact on academic achievement for students who are of low SES or are of Black or Hispanic ethnicity. Sense of belonging was shown to have a positive impact on academic achievement for students who transfer to affluent middle schools.

Through multivariate analysis using the structural equation model, academic motivation was not determined to be an intervening variable for sense of belonging and academic achievement. By definition, according to Baron and Kenny (1986) a mediated, or intervening, relationship between three variables is evident if three conditions are met.
For this study, there needed to be a significant relationship between the sense of belonging and academic achievement. Univariate analysis showed that belonging has a positive impact on academic achievement. Second, there must be a significant relationship between the sense of belonging and achievement motivation. Again, univariate analysis revealed that achievement has a positive impact on sense of belonging. Lastly, there must be a significant relationship between the achievement motivation and the academic achievement. Analysis during the first, quantitative, phase did not find a significant relationship between achievement motivation and academic achievement. Additionally, the path analysis did not support the relationship between the achievement motivation and academic achievement significantly reducing the effect of sense of belonging on academic achievement alone. Specifically, this means that achievement motivation does not account for a portion of the relationship between sense of belonging and academic achievement in the researcher’s model.

Connecting the Study Phases

The first, quantitative, phase and the second, qualitative, phase were connected during the intermediate and the results interpretation stages of this study. During the intermediate stage of the study, the participants for the follow-up interviews were selected through the use of maximal variation and extreme case sampling strategies. An interview protocol was then developed based on the results from the first, quantitative, phase, and the extant literature review. Additional follow-up questions were developed based on participant survey instrument responses in an effort to gain further clarification of their response choices.
Qualitative Phase

During this phase, 12 purposefully selected students were interviewed. The interviews were transcribed and coded for emerging themes. Six of the 12 participants were contacted for follow-up interviews to clarify their initial statements and provide a rationale for a few of their survey instrument responses. The themes, which emerged from these interviews, were “similarity to previous school”, “involvement in new school”, and “process of transition to new school.” These themes were then used to help the researcher identify contextual factors that can have an impact on a transfer student’s sense of belonging, achievement motivation and academic achievement.

Interpreting Quantitative and Qualitative Results

This section integrates the results from the quantitative and qualitative phases of the study and addresses the study meta-inferences. Meta-inferences are developed by integrating the inferences obtained from the quantitative and qualitative data in a mixed methods study (Teddlie & Tashakkori, 2003). The findings from both phases of the study will be discussed by addressing the quantitative results first and then how these results were enhanced by the qualitative findings. This discussion is guided by the overarching mixed methods research question “How does the follow-up qualitative data analysis help explain the relationship derived from the quantitative data regarding academic achievement, sense of belonging and achievement motivation for students with low and high scores for the PSSM and PAL?” Following the discussion, the additional findings are then presented by contextual factors corresponding to themes into similarity to previous school, involvement in school, and process of transition to new school. These results are
supplemented with findings congruent with previous research. Finally, the study results are discussed within the theoretical framework based on Maslow’s (1962) hierarchy of needs and Ogbu’s (1988) cultural-ecological theory.

Quantitative Phase

The first, quantitative, phase of the study was guided by the following research questions: “What is the relationship between sense of belonging, achievement motivation and academic achievement for transfer students to affluent suburban middle schools?” This question was addressed by the development of a theoretical model that was tested using path analysis, a subset of structural equation modeling, to determine the correlation between and among the variables in the study. The model was also used to determine if achievement motivation was an intervening factor between sense of belonging and academic achievement.

Prior to this extensive analysis, to address the subquestions: “What is the role of student demographic characteristics (ethnicity, gender, SES) in the relationship between sense of belonging and academic achievement?” and “What is the role of achievement motivation in the relationship between sense of belonging and academic achievement?” nine null hypotheses were developed. Regression analysis of the participant data was conducted to determine if the variables held a statistically significant relationship and to address each study null hypothesis. Based on the findings of the nine null hypotheses, it was determined that in univariate analysis – one dependent and one independent variable – the following holds true based on the survey instrument data and demographic data (ethnicity, gender, SES) in the relationship between sense of belonging and academic
achievement: a statistically significant interaction existed between student sense of belonging and achievement motivation, Black ethnicity, and free lunch status.

The belonging score of middle school transfer students was positively impacted by their achievement motivation as measured by their mastery goal orientation. With respect to ethnicity, transfer students who were White, Hispanic or Asian had similar belonging scores however, if the transfer student was Black, their sense of belonging score was negatively impacted. The results of the univariate analysis also revealed that students who transferred to affluent middle schools had similar sense of belonging scores independent of their gender. Transfer students had similar sense of belonging scores if they paid for their lunch or received reduced price lunches. However, when considering their socioeconomic status, if the students received free lunches, their sense of belonging score was negatively impacted when compared to their paid lunch peers.

Additionally, a statistically significant interaction was found between student academic achievement and sense of belonging, Black ethnicity and Hispanic ethnicity and free lunch status. The ethnicity of transfer students did not significantly impact the students if they were White or Asian. However, the academic achievement scores of Black and Hispanic transfer students were negatively impacted by their ethnicity. As it relates to their academic achievement, the univariate analysis revealed that academic achievement was similar for all transfer students independent of their gender. When considering their socioeconomic status, transfer students who received paid or reduced priced lunches had similar academic achievement scores. Contrastingly, those who received free lunches, indicating lower SES, had academic achievement scores that were negatively impacted. The academic achievement of all transfer students was significantly impacted by their
sense of belonging. However, their academic achievement was not impacted by their achievement motivation as indicated by their mastery goal orientation score. The results for each tested quantitative variable are further discussed in detail and are extended through the explanation of the subsequent qualitative findings.

**Motivation.** The first, quantitative, phase revealed that achievement motivation was a positive predictor of sense of belonging for seventh-grade and eighth-grade transfer students to affluent suburban middle schools. Overall, the student who expressed a higher achievement motivation score had a higher sense of belonging. This finding supports the fact that having a mastery goal orientation strongly influences a transfer student’s sense of belonging.

Motivation as measured by mastery goal orientation for students has been shown to be strongly influenced by teachers who promote a mastery goal orientation. These quantitative results contradict findings from other researchers who have found that as students move from elementary to middle school, the transition brings about a decline in student mastery goal orientation (E. Anderman, Maehr, & Midgley, 1999; Maehr & Anderman, E., 1993). Ames (1992) posits that the classroom environment can be manipulated to get the desired achievement orientation goals from students. Therefore, the decline in achievement motivation experienced in the transition from elementary school to middle school can be mitigated by changes in the school environment (Urdan & Schoenfelder, 2006).

The second, qualitative phase of this study provided understanding into these quantitative results. Of the 12 interview participants, only Shad transferred from an ele-
mentary school setting. The other participants were previously enrolled in another middle school. Therefore, the researcher did not anticipate a decline in achievement motivation for the participants in the second, qualitative, phase of the study. One aspect of the school environment that emerged during the participant interviews that was beyond the control of the affluent middle schools represented in this study was the size of the school. Most of the participants found the new suburban school to be larger than their previous schools. While this change in the school environment did not predict sense of belonging for the interview participants, it was a factor in their adjustment to their new school. The size differential would have been anticipated for 5 of the 12 interview participants who entered their new suburban middle school from an elementary environment often smaller than a middle school which was typically comprised of several merged elementary schools (Akos, 2002). However, the size difference was also discussed by several of the other seven participants who transferred from another middle school setting when comparing their previous middle school to the new middle school. In addition to size, the school configuration contributed to the type of environment for the transfer student. Whether the student transferred from a traditional elementary setting, a junior high or a five through eight middle school, Eccles and colleagues (1993) found that moving to a new building adversely impacts middle school students as students transition to a new building from sixth grade to seventh grade as opposed to remaining in a K-8 school setting.

Another aspect of the school environment that could impact a student’s achievement motivation was the search for the most appropriate group of friends in a setting that already had friendship ties established. Two interview participants who spoke about the
cliques already established in their new school environment also reported a low belonging score. Nelson and DeBacker (2007) examined the relationship between perceived peer relationships and the student’s achievement motivation and found that the peer relationships explained variances in achievement motivation samples. In their study, the students who felt valued and respected in their school environment emphasized a mastery goal orientation.

Socioeconomic status. The first, quantitative, phase revealed that SES was a predictor of sense of belonging for seventh-grade and eighth-grade transfer students to affluent suburban middle schools. Overall, the students with free lunch status had a lower sense of belonging score when compared to students who paid full price for their lunch or who received their lunch at a reduced price.

One possible explanation for the lower sense of belonging from students in the lower SES would be their inability to become actively involved in their new school setting. In the second, qualitative phase, one participant indicated that participation in extracurricular activities was too expensive for her to participate. The student, a Black female, did not indicate any type of involvement in extracurricular activities – academic or athletic – and had the lowest belonging scores for the students interviewed. A prior study conducted by Faircloth and Hamm (2005) indicated that relationships with teachers, involvement with peers and engagement in school activities were all strong indicators of belonging for White and Hispanic students. Relationship with teachers and engagement in school were also positive indicators of belonging for Black and Asian students.
Another study (Booker, 2004) revealed that sense of belonging for the study participants was influenced by student involvement in extracurricular activities.

Additionally, the first, quantitative, phase also showed that SES was a predictor of academic achievement as well for seventh-grade and eighth-grade transfer students to affluent suburban middle schools. Again, the students with free lunch status had a lower academic achievement score than students who either paid full or reduced price for their daily lunch.

From the second, qualitative, phase of the study, it was noted that five of the twelve interview participants received free lunch. Of these students, four of the five had a low belonging score and three of those four were coupled with a low academic achievement score. These high results were probably more related to the maximal variation sampling strategy employed than a representation of all participants which is more accurately reflected through the quantitative data.

According to the U.S. Census Bureau (2010), it is people below the poverty level who are more likely to move than those above the poverty line. The two interview participants who indicated that they moved frequently supported neither these findings nor the findings of Sanderson (2004) which indicated that students with continuity of curriculum have higher achievement than students who move frequently. Both of these participants in the second, qualitative, phase of the study had high academic achievement. This also contradicts the findings of Alexander, Entwisle, and Dauber (1994) who believed that academic progress was slowed by frequent moving because the changes result in new teachers, new environment, and often a different academic emphasis. It is the belief of
this researcher that the family support for both of these participants helped them overcome obstacles to academic achievement in their new middle school surroundings.

**Ethnicity.** The first, quantitative, phase revealed that ethnicity was a predictor of sense of belonging for seventh-grade and eighth-grade transfer students to affluent suburban middle schools. Overall, Black students had a lower sense of belonging when compared to their White counterparts. Having a lower belonging score for Black transfer students in this study supports the findings from numerous other studies (Anderman, E., 2002; Booker, 2004; Goodenow, 1993b; Roeser et al., 1996), which indicated that African Americans score lower in measures of belonging. Interestingly, Booker’s study (2004) contradicts the above finding related to the academic achievement of African American students. In her work, she did not find that the perception of belonging accounted for any variances in the academic achievement of the African American students she worked with. However, Booker’s study sample was African American students in a predominantly African American school as opposed to a predominantly White setting as in this study.

In the second, qualitative, phase the racial make-up of the school caused a degree of apprehension for two interview participants who achieved a low belonging score and low academic achievement score. Both represented an ethnic minority in each of their predominantly White affluent suburban middle schools. Phelan, Yu, and Davidson (1994) postulated that the cultural contrast between the home and school environment of minority students contributes to their sense of belonging. Houston’s (1988) supported these findings when he found that when minorities are placed in suburban environments, most
often their culture, values and attitudes are different from the majority population of the
school. Cornille, Bayer, and Smyth (1983) in their turn found that the students who are
culturally different from the school’s majority population experience difficulty. This cul-
tural contrast does not have to be based on ethnicity alone. In fact, in this study, one
White, female interview participant who was from another country also had a low be-
longing score.

The quantitative analysis also revealed that ethnicity was a predictor of academic
achievement for seventh-grade and eighth-grade transfer students to affluent suburban
middle schools. Black as well as Hispanic students had lower academic achievement
scores than students who were either White or Asian. The lower academic achievement
scores finding is consistent with research by Wenz-Gross and Parker (1999) who reported
that minority students and males seemed to have more diverse challenges in their transi-
tion than non-minority and females.

In the second, qualitative, phase of the study, due to the maximal variation and
extreme case sampling process, the interview participants represented an equal distribu-
tion of ethnicities with high and low belonging and with high and low academic
achievement. The researcher found that the degree of belonging and achievement level
varied within and between the ethnicities for the 12 participants. Therefore, it is assumed
that the other factors of similarity to previous school, involvement in new school and
process of transition to new school play a significant role in impacting a student’s sense
of belonging and academic achievement in addition to simply considering their ethnicity;
however, it is a good place to start.
Gender. The results of the univariate analysis during the first, quantitative, phase revealed that students who transferred to affluent middle schools had similar sense of belonging scores and academic achievement independent of their gender. These findings related to gender are supported by the study of urban Latino adolescents to determine if sense of belonging would play a different role in academic adjustment of students based on gender (Sánchez et al., 2005). While Sánchez and colleagues did not find a significant gender difference in student sense of belonging, they did postulate that the differences which were noted might explain academic achievement differences which were noted with girls who were found to perform better academically than boys in their study sample. The gender findings on belonging in this study contradict the studies by Goodenow (1993a, b) and Goodenow and Grady (1993), which suggested that girls have a greater sense of belonging than boys. However, Akos (2002) supported these findings related to gender in his study which concluded that gender is not a significant factor in a student’s feeling of connectedness during a period of transition.

These gender-related achievement results were contradicted by Chung, Elias, and Schneider (1998) who found that boys and girls experience their transition to middle school differently in that boys achieve below the level of girls. The variety of findings for both sense of belonging and achievement related to gender could be attributed to the study sample being represented more by females (56.55%). Additionally, the work of each of the above noted researchers was with a different representative population. The samples varied by age, ethnicity and SES. None of the studies reflect findings for seventh-grade and eighth-grade students who transfer to affluent suburban middle schools.
The second, qualitative, phase did not add any depth to the findings related to gender due to the low representation of males in the interview phase of the study. Only 2 of the 12 interview participants were male.

*Sense of belonging.* The first, quantitative, phase revealed that sense of belonging was a predictor for academic achievement for seventh-grade and eighth-grade transfer students to affluent suburban middle schools. Overall, the students who had a higher sense of belonging score also achieved higher academic scores in the classroom. This finding was reflected in the data from this study which showed that 61.96% of the students who achieved a belonging score above the mean also achieved an academic achievement score above the mean.

The researcher then continued with the quantitative phase of the study by conducting further data analysis using a model thought to describe the interaction between the demographic characteristics of the students, sense of belonging, achievement motivation and academic achievement. This interaction was tested using path analysis. This analysis allowed the researcher to consider multiple combinations at the same time to determine the relationship between sense of belonging, achievement motivation and academic achievement. While the model was shown to represent a good fit for the data, based on the four goodness-of-fit indices, achievement motivation was not shown to be an intervening variable between sense of belonging and academic achievement. While Goode-now (1991) noted that age is an intervening variable for student sense of belonging and achievement motivation, her research did not support academic motivation being an intervening variable between sense of belonging and academic achievement either. However-
er, the researcher in this study did find a significant relationship between achievement motivation and academic achievement.

During the second, qualitative, phase of the study, interview participants discussed several factors which could be manipulated to have a positive impact on their degree of sense of belonging within their new affluent middle school setting. These include involvement in extracurricular activities and transitional support from teachers. Booker (2004), Goodenow (1993a) and Wentzel (1997) have all emphasized the influence of positive interactions between students, teachers and peers in the development of sense of belonging within a school. Several students in this study reported positive interactions with their new peers even before school started by trying out for activities which began before school officially started. They reported that this helped tremendously with the development of their sense of belonging from the beginning. Four of the five participants who reported being involved in activities also had a high sense of belonging score. Wentzel (1998) found that when students perceive that they are supported by their teachers, they are more likely to adopt goals consistent with the norms of their new classrooms.

The size and configuration of the new school did not significantly impact the sense of belonging and academic achievement of the interview participants although there was recognition of the differences between their previous school and their new school. E. Anderman (2002) examined the school size, grade configuration, and urbanicity and their relationship to a student’s sense of belonging. While he did not find size was related, grade configuration of the school was weakly related and being in an urban setting resulted in a lower sense of belonging than being in a suburban setting.
In the first, quantitative, phase it was determined that students who received free lunch and were of Black ethnicity had a lower sense of belonging than their paid lunch and White ethnicity counterparts, respectively. The researcher was only able to get two interview participants to briefly discuss inequities they noted at their school which they felt were based on ethnicity. A Hispanic student indicated that she received less assistance from peer helpers than another new student 2- weeks later who was White. Also, a Black interview participant felt that the rules were different for her in her new school. She specifically mentioned dress code discrepancies that she felt favored non-minority students.

According to Connell and Wellborn (1991), it is this relationship with teachers that the interview participants spoke of that has a greater effect on a student’s psychological state than the support of a parent from home. In addition to relationship with teachers, involvement with peers, and participation in school activities being indicators of belonging for all students, Faircloth and Hamm (2005) also indicated that perceived ethnic-based discrimination was also an indicator of belonging. Lastly, Goodenow (1993a) pointed out that when students feel they are different or dissimilar from their teachers or peers, this perception negatively impacts their sense of belonging. Because many of this study’s participants, 56.55%, represented an ethnic minority in a predominantly White school setting, it is important that teachers work to ensure that students do not feel dissimilar as a means of improving student sense of belonging.
Additional Contextual Factors Revealed by Qualitative Phase

The second, qualitative phase of the study was guided by the central question “What factors influence academic achievement for students with low and high belonging scores who transfer to affluent middle schools?” Consistent with the mixed methods explanatory design, one of the sub-questions was “What other factors besides those explored in the quantitative phase influence academic achievement of seventh-grade and eighth-grade transfer students?” The analysis of the interview data yielded three persistent themes “similarity to previous school”, “involvement in new school”, and “process of transition to new school”. They provided further explanation to the factors tested in the quantitative phase, as well as revealed some additional contextual factors that helped explain the variation in some of the participant’s scores tested in the quantitative phase that did not fit the proposed model. These additional factors were not revealed and tested for in the analysis of the data in the first, quantitative, phase of the study. While sense of belonging was measured for each participant, the factors which impacted the participants’ high or low sense of belonging were not evident from their belonging score. Additionally, academic achievement was determined for each participant; however, factors impacting the participants’ level of achievement were not evident based on the data collected in the first, quantitative, phase of the study. The further section will discuss only the contextual factors that were not yet addressed while discussing the quantitative results.

Similarity to Previous School

Environment. The racial make-up of the school contributed to the overall environment of the school and caused uneasiness for two interview participants who demon-
strated a low belonging score and low academic achievement score. A study by Akos and Galassi (2004a) did not reveal race or gender as an influencing factor in students’ transition to middle school or to their feelings of connectedness to the new school. Prior to Akos and Galassi’s findings, Wenz-Gross and Parker (1999) reported that minority students and males seemed to have more diverse challenges in their transition than non-minority and females. Bayer and other colleagues (Cornille et al., 1983) also found that students from a culturally different group from the school’s majority population experienced difficulty following a transfer. Each of the schools represented in this study had a predominantly White student body with a predominantly White faculty. Stevens, Hamman, and Olivarez (2007) found in their study of 434 fifth-grade and sixth-grade Hispanic students from a West Texas district who were being taught by predominantly White teachers, that the students experience a typical sense of belonging however; this sense of belonging was positively influenced by the teachers who they felt promoted a mastery goal orientation. In other words, the Hispanic students preferred an emphasis on learning as opposed to an emphasis on performance. The predominantly White sample of teachers in their study was able to positively impact the sense of belonging for the students who were culturally different by emphasizing a mastery goal orientation. Presumably, this contextual factor can be manipulated by school administrators through professional development for their teachers and staff.

**Academic preparation.** Participants were asked to discuss their academic performance at their new school, the academic differences between their old and new school and whether they felt academically prepared for their new school environment. The stu-
students who felt well prepared continued to achieve academically in their new school environment. Students who did not perform well academically indicated that the content was either harder, on another level than their previous school or teacher expectations were higher requiring an adjustment on their part.

*Involvement in New School*

*Student personality.* Students who appeared shy to the researcher or who were self-described as shy had low sense of belonging scores. Cornille et al. (1983) reported that being shy or having poor social skills complicates the adjustment of students who are culturally different from the majority population. In this study, the students who were more outgoing, all but only one achieved a high sense of belonging score. The researcher believes her time of transition, January, was a factor in this score. Although entering during the month of January is an un-scheduled transition time, as described by Jason (1992), it usually signifies the beginning of a semester and is considered by some as a fresh start for all students. Many students begin their second semester long course or begin a new unit upon return from the holidays. This allows students who transfer in January to be a part of the beginning of routines that are often missed during other un-scheduled transition times.

*Process of Transition to New School*

*Outlook toward transition.* In describing their transition or transfer experience, several participants made reference to how they felt about the move from their old school to the new suburban school. Students who had previously excelled academically in their
old school, had a strong sense of belonging or were accustomed to changing schools frequently had a better attitude towards their transition to their new school. For others who had a negative attitude towards the transition or a negative experience at the beginning of the transition, belonging and academic achievement scores were low.

Warren-Sholberg and Jason (1992) determined that the reason for a school transfer affected the student’s adjustment. They also determined that students who transferred for “household considerations,” defined by Cornille et al. (1983) as forced moves, formation of a new household and considerations of costs, experienced low academic achievement. None of the interview participants in this study indicated that their transfer was related to household considerations. However, several indicated that they were reluctant to come to their new school. Those who expressed this reluctance had lower belonging scores.

**Time of transition.** Time of transition to the new school was important for the study participants. Some moved over the summer and entered at the beginning of the school year. Others transitioned after school had started for everyone else. Thus, time of transition (both time of year and grade level of change) impacted the adjustment of new student. Student comments ranged from being alone on the first day to having sports peers to ease their transition. Those who transitioned later in the year found it difficult to find their way even with the help of peer assistants.

Jason (1992) described students who transfer over the summer or during the middle of the year, as unscheduled transitions. These students typically do not benefit from the structured orientation programs that students entering from a feeder school are pro-
vided. Although only four of the interview participants in the study entered their school mid-year, because all of the study participants were seventh-grade and eighth-grade students, most teachers assumed they knew the procedures and rules of the school.

*Transitional support.* In describing their transition, most of the participants indicated that not having friends initially was a factor in how they perceived the transition. Several prompts solicited information about whether the student felt accepted, welcomed and treated with respect by their peers. The majority of the students had a supportive relationship with peers. The four participants who indicated a difficult time with peer relationships also had a low belonging score. Not having friends impacted their sense of belonging. Strother and Harvill (1986) supported this finding in their article for school counselors which stated that the most difficult aspect of a move is the loss of valued peer relationships in the previous setting. Several of the interview participants spoke of having known their peers in their previous school setting all their lives. One interview participant with a low belonging and academic achievement score stated in her follow-up interview that the people who belonged at [current school] were people who had gone to school together for years.

This finding fits the research of Wenz-Gross and Parker (1999) which revealed that minority students, four of the six in this study with low belonging scores, and males seem to have more diverse challenges in their transition than non-minority and females. One female interview participant who was from another country also had a low belonging score. Cornille et al. (1983) found that the students who are culturally different from the school’s majority population experience difficulty.
Although adolescence is typically a time when students begin to pull away from their parents in an effort to establish their independence, strong parental support seemed to help students transition successfully to their new affluent suburban middle school.

This parental support was independent of whether the student had a single parent or two parent home. Interview participants spoke of talking about their transition with their parents, making the decision to move with their parent, spending time with their nuclear and extended family outside of school. Several participants had their parents present during the interview indicating an interest in the activities of their child.

In summary, understanding the additional factors of similarity to previous school, involvement in new school and process of transition to new school helped provide a better understanding of influences on sense of belonging. Because academic achievement was found in this study to be impacted by sense of belonging, a contextual factor that can be manipulated, this information could be used to help students who transfer to affluent suburban middle schools. The implications of this study’s results for educators are discussed in further detail in the following section.

The factors of sense of belonging, ethnicity and socioeconomic status that were identified as impacting academic achievement by the path analysis in the first, quantitative, phase did not consistently predict the academic achievement of the participants selected for the in-depth interviews in the second, qualitative, phase of the study. Students who represented the four ethnic groups with varying degrees of sense of belonging and socioeconomic status had academic achievement scores which ranged from low to high. This indicated to the researcher that other factors influence the academic achievement of seventh-grade and eighth-grade transfer students.
Through in-depth interviews and analyzing the words of the participants, the researcher found that similarity to previous school based on environment and academic preparation were relevant factors impacting not only the student’s sense of belonging but academic achievement as well. The degree of involvement in their new school also impacted the transfer student’s sense of belonging and academic achievement. This involvement was related to the ability of the student to get involved based on their personality which either assisted or impeded the student’s ability to get involved. Finally, the process of the student’s transition was a final factor that influenced the transfer student’s sense of belonging and academic achievement in their new school. The student’s overall outlook on the transition, the time of the transition and the transitional support received, particularly that of peers and parents, worked together to influence the transfer student’s sense of belonging and academic achievement beyond their ethnicity and socioeconomic status.

By using this mixed methods approach, the researcher was able to go beyond the initial quantitative findings to get a better understanding of the research problem by extending and elaborating on the initial quantitative results. Knowing the additional influences on the transfer student beyond those determined in the quantitative phase can help improve the sense of belonging and academic achievement for all transfer students.

New Findings

This study generated new findings pertaining to the relationship between belongingness and achievement of transfer students to affluent suburban middle schools.
Table 31

New Findings and Findings Congruent with Previous Research

<table>
<thead>
<tr>
<th>New Findings</th>
<th>Findings Congruent with Previous Research</th>
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<tr>
<td>Similarity to Previous School – Environment</td>
<td>Similarity to Previous School – Configuration</td>
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<tr>
<td>Cornille, Bayer, &amp; Smyth (1983); Ford (2010); L. Anderman (2003); Booker</td>
<td>Akos (2002); Eccles et al. (1993)</td>
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<tr>
<td>(2004); Houston (1988); E. Anderman (2002); Goodenow (1993b)</td>
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<tr>
<td>Similarity to Previous School – Academic Preparation</td>
<td>Involvement in School – Extracurricular</td>
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<tr>
<td>Morris, Pestaner &amp; Nelson (1967); Sanderson (2004)</td>
<td>Uwah, McMahon, &amp; Furlow (2008); Anderman (2003); Faircloth &amp; Hamm</td>
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<td></td>
<td>(2005); Akos (2006)</td>
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<tr>
<td>Involvement in School – Student Personality</td>
<td>Process of Transition - Transitional Support</td>
</tr>
<tr>
<td>Cornille, Bayer, &amp; Smyth (1983); Way &amp; Chen (2000); Clark &amp; Ayers (1992)</td>
<td>– Relationship with Teachers</td>
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<td></td>
<td>Battistich et al. (1995); Akos (2002); Wentzel (1997, 1998); Goodenow</td>
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<td></td>
<td>Connell &amp; Wellborn (1991); Faircloth &amp; Hamm (2005)</td>
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<td>Process of Transition - Outlook Toward Transition</td>
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<td>Warren-Sohlberg &amp; Jason (1992)</td>
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<td>Process of Transition - Time of Transition</td>
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<td>Jason (1992); Bayer (1982)</td>
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<tr>
<td>Process of Transition - Transitional Support – Relationship with Peers</td>
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<td>Berndt (1979); Goodenow (1993a)</td>
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<td>Maslow (1962)</td>
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Table 31). The researcher found that the environment and academic preparation were relevant factors impacting not only the student’s sense of belonging but academic achievement as well. The environment for many of the transfer students interviewed in this study was culturally different from their previous school. Cornille et al. (1983) believe that when this happens, students “[may] have greater challenges in [their] school adjustment” (p. 231) than students who are not culturally different. Ford (2010) supported this hypothesis when she commented that the students who experience the least amount of success in school are typically the students who are “culturally different from the dominant or mainstream group” (p. 50). Additionally, Goodenow (1993b) and Booker (2004) have found that minority students in a majority school setting experience a lower sense of belonging which often impacts their academic achievement.

L. Anderman’s (2003) research added that the degree of racial integration in the school’s student population and the faculty of the school had a positive correlation with students’ sense of belonging. This supports the premise of the cultural ecological theory which posits that the ethnic distribution within a school is important. All of which is a major part of the environment that many transfer students entering an affluent suburban middle school are faced with. Houston (1988) noted in his research that when placed in a suburban environment, nonurban minorities are faced with an environment in which their culture, values and attitudes are completely different from their classmates and teacher. This fact can make adjustment to a new school setting particularly difficult.

Given that the seventh-grade and eighth-grade non-minority (White) student population from each of the six affluent suburban middle schools ranged from approximately 58% to 83%, many of the transfer students who participated in the study (over 56%)
represented a minority population and therefore may have experienced the cultural contrast spoken of in previous research which impacted their sense of belonging.

Another important aspect of the transfer student’s new environment is the fact that the majority of the current students have been in school together for a number of years, some even since kindergarten. E. Anderman (2002) found that aggregated school belonging (at the school level) was positively related to social rejection, school problems and grade point average. This means that in a school where the majority of the students feel as if they do belong (those who have been together for multiple years), the students who do not feel as if they belong experience more social rejection and school problems as an individual.

Comments by some of the interview participants indicated that their academic preparation in their previous school was not similar to the preparation required in their new setting and therefore, was not adequate for success in their new school setting. The students commented that their previous school did not have advanced classes and that the homework load in their new affluent suburban middle school was heavier. However, they quickly realized that their “new school was more difficult” and “on a different level” requiring them to “step it up” in order to compete academically. As far back as 1967, in exploring the relationship between mobility and achievement, Morris, Pestaner, and Nelson (1967) determined that high achieving students from upper-SES families continued to achieve at a high level following a move. By contrast, many students from lower-SES families began to decline in achievement despite having been high achievers prior to their move. This researcher’s experience with middle school transfer students has reflected that students, who have been adequately prepared, perhaps in another upper-SES school
setting, continue to perform well. Whereas, students who thought they were being adequately prepared in their previous lower-SES school setting find that they are not prepared for the academic rigors of their new affluent suburban middle school.

Sanderson’s (2004) work with mobile students provides another potential explanation for the lack of academic preparation for the transfer students. She found that stable students with their entire career within the same school were found to be learning what the state assessed to a greater degree than students with increased mobility. This was due to the stable students experiencing a continuity of curriculum without the flow of learning being interrupted by frequent moving. The transfer students may have the same ability and capabilities; however, because they lack the continuity of curriculum needed for academic success, their academic achievement suffers following their transfer.

The degree of involvement in their new school also impacted the transfer student’s sense of belonging and academic achievement. Getting involved was sometimes based on the personality of the student which either assisted or impeded the student’s ability to get involved. Cornille et al. (1983) found that being a shy student or one with poor social skills complicated the adjustment process for students. Therefore, the shy student has a tough time reaching out and getting involved. Additionally, they found that students from a culturally different group from the school’s majority population experienced difficulty adjusting. Another plausible explanation for the transfer students’ lack of involvement could be that their friends are not involved in similar activities. Way and Chen (2000) found that the close friend of minority students was less likely to be found within the school setting. Students are then doubly isolated when they do not have a home peer group or a school peer group both due to the move. Similarly, Clark and
Ayers (1992) found that African American students were twice as likely as Caucasian students to indicate that their best friends would be found outside of the school context. Because students typically join activities that their friends participate in, if the minority students’ most influential friends are not within the school setting, the student is not influenced to join extracurricular activities.

Finally, the process of the student’s transition was a final factor that influenced the transfer student’s sense of belonging and academic achievement in their new school. The student’s overall outlook on the transition, the time of the transition and the transitional support received, particularly that of peers and parents, worked together to influence the transfer student’s sense of belonging and academic achievement beyond their ethnicity and socioeconomic status.

Warren-Sohlberg and Jason (1992) hypothesized that the reason for a transfer affected the student’s adjustment and how the school should help the newcomer. Many of the interview participants transferred due to a new position for a family member or simply in search of a better educational setting. Their overall acceptance of the transfer was positive although many missed those lifetime friends they had left behind.

When considering the timing of the transfer, Jason (1992) reported that scheduled transition students benefited from involvement in structured orientation programs and were afforded the benefit of an adjustment period to become familiar with their new surroundings. Students who transferred over the summer or during the middle of the year, on the other hand, were considered unscheduled transitions and typically only involve individual students. These students often transitioned to the new school without the benefit of structured orientation programs. The interview participants who entered at the beginning
of the year fared better than those who entered in later months. In fact, the student who entered the last two months of school had a low belonging and achievement score as well as the challenges of a minority status within a majority school setting. Bayer (1982) reminded us that an unscheduled transition can have negative consequences for the student. Unlike scheduled transitions where students from a previous school move with the child (from the feeder schools for example), transfer students are not only adjusting to a new environment but a new peer group as well.

The relationship with peers become particularly important during this stage of development because identification with peers and the need to conform to peer norms increases (Berndt, 1979). At this time in their lives, friends help young adolescents develop a sense of identity as they adjust to the pubertal changes. Adolescents who have an increasing need to identify with their peers and conform to the peer norms (Berndt, 1979) have these friendships interrupted when the students are in transition. Further research investigating the relationship between belonging and achievement motivation and academic achievement of suburban middle school students in New England (Goodenow, 1993a) has shown that when students feel that they are different or dissimilar from their teachers or peers, this perception negatively impacts their sense of belonging.

A strong family support system assists in meeting the deficiency needs noted on Maslow’s (1962) hierarchy of needs on a daily basis. When this is accomplished at home, the lack of a sense of belonging in school seems to be mediated until the sense can be developed. Deficiency needs are the lower level needs identified as physiological (hunger, thirst, etc.), safety (to feel safe, secure, out of danger), love and belonging (to affiliate
with others, to be accepted and belong), and esteem (to achieve, be competent, and gain approval and recognition) (Maslow, 1962).

Addressing the Theoretical Framework

The achieved mixed methods inferences from this study’s research relate to both Maslow’s (1962) hierarchy of needs as well as Ogbu’s (1988) cultural-ecological theory. Maslow (1962) asserted that the need to belong must be met before an individual could move to the next level on the hierarchy of needs. He proposed that the next level described an individual’s motivation for completing tasks. The quantitative results provided support for this theory. The univariate analysis revealed that sense of belonging positively impacts transfer student’s academic achievement. Maslow argued that individuals who struggled to have their lower level physiological and safety needs met on a daily basis, i.e. students of a lower socioeconomic status, failed to climb the hierarchy to belonging and knowledge at the same rate as those from higher socioeconomic standing. Maslow’s assertion was supported by the results from the first, quantitative, phase of this study that indicated student sense of belonging and achievement was negatively impacted by SES. Additionally, if a student held a high sense of belonging, their achievement was positively impacted.

Four of the five students interviewed who received free lunch (indicating low SES) had a low sense of belonging. Contrastingly, only two of the remaining seven interview participants who paid for their lunch (indicating higher SES) had a low sense of belonging. In follow-up interviews with these two participants to attempt to determine why their belonging score varied from the other paid lunch transfer students, one who
transferred from a different country, explained that she did not want to belong. Her desire was to go back home where she knew all of her peers and felt that she fit in better. This sentiment was reiterated by the other higher SES student who obtained a low sense of belonging score.

For students who transfer to affluent middle schools, being of a lower SES can impact the student’s ability to belong. One student who was interviewed indicated that she was unable to try out for an extracurricular activity due to the cost of the activity. Because involvement in school was found to be an influence on student sense of belonging, this student who had a low sense of belonging score and a low achievement score, could have been positively impacted if she had been financially able to participate in the activity.

Ogbu’s (1988) CE theory posits that the ethnic distribution within a school is important to a student. The six school sites represented in this study are all considered affluent middle schools based on this study’s definition of affluence (less than 30% free/reduced lunch recipients) and are predominantly White (see Table 1). The quantitative results indicate that there is a statistically significant difference between the sense of belonging for Black students relative to their White counterparts in this study as well as a statistically significant difference between the academic achievement of Black and Hispanic students relative to their White counterparts. Both constructs, belonging and achievement, are negatively impacted by the ethnicity of the transfer students. Ogbu would argue that this is a result of the “dynamic interactions occurring between individuals and their social contexts” (Booker, 2004, p. 132).
The in-depth interviews of an ethnically diverse group of students showed that of the six purposefully selected students with low academic achievement, four were ethnically different from the majority population within the school. The other two students with low academic achievement were White; however; one student indicated that she had difficulty with school due to diagnosed learning disabilities and the other student, though of White ethnicity, also was culturally different because she transferred from another country. Additionally, of the four students who had a low sense of belonging and a low academic achievement score, all four were either ethnically or culturally different from the majority population of the school.

There were four interview participants who were exceptions to Ogbu’s (1988) CE theory. The in-depth interviews helped to explain factors which may have influenced these exceptions in which students who were ethnically different obtained high academic achievement scores. The students’ outlook towards the transition played a large part in their academic success as well as their strong supportive family units which assisted them through their transfer to their new affluent middle school. Their academic preparation from their previous school also played a key role in their high level of academic achievement in their new surroundings.

Implications for Educators

This study provided insight into the relationship between sense of belonging, achievement motivation and academic achievement for seventh-grade and eighth-grade transfer students to affluent suburban middle schools. While this study was intended to raise awareness about how transition impacts students who transfer to affluent suburban
middle schools, it is not intended to provide a definite profile of students who will face
difficulty with sense of belonging, achievement motivation and academic achievement in
their new school setting. As the qualitative data revealed, even though the quantitative
data may strongly indicate a statistical significance for a negative or positive impact on a
particular subgroup, exceptions can always be noted who were influenced by one or more
of the qualitative themes that emerged.

Students with low academic achievement motivation, Black students and free
lunch students were found to be more likely to have a low sense of belonging when they
transfer to affluent suburban middle schools. These students should be monitored through
a structured transitional program. Because sense of belonging has a positive correlation
with academic achievement, it is incumbent upon educators to identify those students in
need of this critical support. Because suburban middle schools are still predominantly
White, the students who are not similar to the dominant culture may need assistance in
learning and meeting the school norms.

Student academic achievement was also found to have a statistically significant
interaction with sense of belonging, free lunch status, Black ethnicity and Hispanic eth-
nicity. As stated above, increasing student sense of belonging will have a positive impact
on academic achievement. Sense of belonging can be developed through the promotion
of student involvement and the proper transitional support provided by teachers. These
are two contextual aspects that are within the control of educators.

These findings show that school administrators and counselors should closely
monitor transfer student who are Black and receive free lunch and work towards improv-
ing their achievement motivation to assist in improving their sense of belonging. Even
though achievement motivation was not shown to directly impact academic achievement, by improving a student’s achievement motivation, perhaps their academic achievement will improve also. This may apply particularly for Hispanic, Black and free lunch students whose ethnicity and SES have a negative impact on their academic achievement.

While SES is not a contextual factor that can be manipulated, knowing the socioeconomic status of a transfer student will help school administrators and counselors know which students are more susceptible to having a lower sense of belonging and lower academic achievement in their new affluent middle school. This will enable them to closely monitor these students. Because it is known that students from lower SES experience greater difficulty with school transitions (Felner, Primavera, & Cauce, 1981), it is imperative that school administrators and counselors work with these students to make their transition to their new affluent middle school smoother.

Ethnicity, like SES, of a transferring student cannot be manipulated or influenced within the school environment. However, knowing the ethnicity of a transfer student will help school administrators and counselors know which students may be more susceptible to having a lower sense of belonging and lower academic achievement in their new affluent middle school. The same practices and procedures developed to assist lower socioeconomic status transfer students should also be focused on Black and Hispanic students to assist in improving their sense of belonging and academic achievement. It is worth the investment of time and resources as Battistich et al. (1995) stated that the effects of poverty can be diminished by an improved sense of belonging for students.

All students who enter the new affluent suburban middle school should be surveyed by administrators, counselors or teachers to determine information about their pre-
vious school such as size and configuration. These physical aspects were shown to be factors impacting a students’ sense of belonging. One-on-one discussions with the transfer student might reveal the type of environment the student is coming from including its racial make-up and whether the student is coming from a private or public school. Additionally, it would be beneficial to know if the student’s outlook toward the transition was positive or negative and how often the student had moved in the past. These were all factored that impacted the sense of belonging for the interview participants.

Once this information is obtained, administrators, counselors and teachers will have a better idea of which students are in danger of not developing a high sense of belonging within their new school. Because this has been shown to directly influence academic achievement, it would then be important to work with the students to improve their sense of belonging.

Finally, school districts and individual schools should make a concerted effort to improve the ethnic distribution of their faculty to reflect their changing student population in affluent suburban middle schools. Because it is known that the degree of racial integration in the school’s student population and the faculty of the school has a positive correlation with students’ sense of belonging, again, this is a contextual factor that can be manipulated by the administration.

Recommendations for Future Research

As a result of the findings and implications in this study, the following recommendations for future research are suggested:
This study used participants who were currently enrolled in seventh-grade and eighth-grade because a transfer student was defined as a student who did not attend a feeder school, these participants had been enrolled from almost 2 years to a few weeks. This variability could have affected the study results. Additionally, prior level of academic achievement was not controlled for in this study. The relationship between belongingness and achievement for middle school transfer students should be explored with length of time enrolled and prior level of academic achievement controlled for participants.

The overrepresentation of one school site of paid lunch participants could have skewed the data results to reflect the students at that one particular school or socioeconomic standing instead of for a representative sample from the six schools. Additional studies should be conducted with a larger sample size and more diverse representation of free, reduced, and paid lunch students.

Additional studies to test the validity of the final model of the path analysis and its generalizability to other populations are recommended. The type of model modification performed called data driven modifications often lead to a model that fits the characteristics of the specific sample data; however, it may not fit the theoretical framework of the researcher (Hatcher, 1994).

This study used a subscale of PALS as the sole measure of achievement motivation for the transfer students. Additional studies using a different instrument to measure achievement motivation that focuses not only on goal orientation but other aspects of student motivation such as self-concept, self-efficacy and intrinsic value for learning as these were factors discussed in the literature which also impacted a student’s motivation.
Thus, all recommended future research should seek results to inform school administrators and teachers on means of increasing sense of belonging and achievement motivation and thereby producing a corresponding increase in academic achievement. Additionally, an improved sense of belonging can possibly lead to a student who adjusts to middle school life easier.

Conclusion

This study was undertaken to assist educators in working with a new population of students arriving daily in affluent suburban middle schools. Educators in these predominantly White communities need to consider ways to positively impact the academic achievement of students, particularly minority students, who transfer to their middle school. This study is important because the number of students transferring to affluent suburban middle schools increases each year. These students move from a variety of educational settings including rural, urban, suburban and private schools. In the first, quantitative, phase it was determined that the sense of belonging for students who receive free lunch and are of Black ethnicity is negatively impacted. Additionally, achievement motivation was found to have a positive impact on belonging. It was also determined that academic achievement is negatively impacted for students who receive free lunch and students of Black and Hispanic ethnicity. Of the students who transfer, minority and low SES students seem to have the most difficult time with their adjustment. This researcher wanted to explore the impact of sense of belonging on one aspect of the student’s adjustment process – academic achievement. If this contextual construct can be manipulated in each affluent suburban middle school represented in the study, it would be a means of
closing the achievement gap between the dominant White, higher SES student and the minority, lower SES student in these schools.

Possible contextual factors were explored in the second, qualitative, phase through in-depth interviews with 12 participants. This phase of the study revealed that similarity to previous school, involvement in new school and process of transition helped to explain variances in findings from the first, quantitative, phase of the study. Maslow’s (1962) hierarchy of needs and Ogbu’s (1988) CE theory guided this study. Both theories were supported in this study. The quantitative findings revealed that belonging positively impacts a student’s academic achievement as posited by Maslow. Additionally, Maslow believed that individuals of lower economic standing struggled daily to climb the hierarchy and therefore rarely reached to upper level needs such as the need for knowledge. This was supported with the findings that sense of belonging and academic achievement is negatively impacted by student SES. Ogbu’s cultural-ecological theory purports that the ethnic distribution within a school is important to the outcomes achieved by the student. Each school site was predominantly White with a predominantly White faculty. For this study with this degree of ethnic distribution within the schools, there was a statistically significant difference between the academic achievement of Black and Hispanic students.

Future research should address the limitations noted within this study to provide a clearer picture of the relationship between sense of belonging and achievement for middle school transfer students. It is hoped that the results of this study as well as future studies will be used to assist administrators, teachers and students in closing the achievement gap between all subgroups measured by NCLB mandates.
LIST OF REFERENCES


APPENDIX A

LITERATURE MAP
What is the relationship between sense of belongingness and achievement for transfer students to affluent suburban middle schools?

Theoretical Framework:
Maslow, 1962; Ogbu, 1994
APPENDIX B

INSTITUTIONAL REVIEW BOARD APPROVAL FORM
Form 4: IRB Approval Form
Identification and Certification of Research
Projects Involving Human Subjects

UAB's Institutional Review Boards for Human Use (IRBs) have an approved Federalwide Assurance with the Office for Human Research Protections (OHRP). The Assurance number is FWA00005960 and it expires on October 26, 2010. The UAB IRBs are also in compliance with 21 CFR Parts 50 and 56 and ICH GCP Guidelines.

Principal Investigator: MADDOX, TAMALA R
Co-Investigator(s):  
Protocol number: A10000000
Protocol Title: A Mixed-Methods inquiry into the Relationship Between Belongingness and Achievement of Transfer Students in Affluent Suburban Middle Schools

The IRB reviewed and approved the above named project on 6-9-10. The review was conducted in accordance with UAB's Assurance of Compliance approved by the Department of Health and Human Services. This Project will be subject to Annual continuing review as provided in that Assurance.

This project received EXPEDITED review.

IRB Approval Date: 6-9-10
Date IRB Approval Issued: 6-4-10

Marilyn Doss, M.A.
Vice Chair of the Institutional Review Board for Human Use (IRB)

Investigators please note:
The IRB approved consent form used in the study must contain the IRB approval date and expiration date.

IRB approval is given for one year unless otherwise noted. For projects subject to annual review research activities may not continue past the one year anniversary of the IRB approval date.

Any modifications in the study methodology, protocol and/or consent form must be submitted for review and approval to the IRB prior to implementation.

Adverse Events and/or unanticipated risks to subjects or others at UAB or other participating institutions must be reported promptly to the IRB.
APPENDIX C

REQUEST TO CONDUCT RESEARCH IN SCHOOL DISTRICT
1726 Sandy Ridge Way  
Hoover, AL 35244  

April 20, 2009  

Superintendent:  

I am writing to request provisional approval to conduct research within your school district in the fall in your district. Attached please find documents that will be submitted along with your provisional approval for your middle schools on school district letterhead to the UAB Institutional Review Board (IRB) in order to obtain their approval to conduct Educational Leadership Doctoral Dissertation research. Documents enclosed include (a) Parent and Student Informed Consent, (b) cover letter to parents, (c) copies of all surveys and questionnaires to be utilized, and (d) pending Application of Investigation Involving the Use of Human Subjects. Upon approval by UAB’s IRB, I will submit documentation to your office to obtain your final approval to conduct research within your district.

Briefly, research will be conducted with no intrusive procedures or processes. Data collection will begin in September 2009 requiring approximately 45 minutes of student time to be surveyed. Your middle schools are three of six middle schools I am seeking approval to conduct research. I will conclude all data collection by December 2009. No experimental data will be collected. No confidential or otherwise sensitive data will be reported in a way that will allow readers to identify individual participants, the school, or the school district. Data collection will be done in a manner that maintains participant confidentiality. Survey data collection will take place during school hours during non-academic instructional time. Follow-up interviews will be conducted at a location agreed upon by the researcher and the parent/guardian of the participant. All participation is voluntary, and no rewards or payment will be given unless a student is selected for the interview phase of the study. Participants may withdraw from the study at any time.

I have enclosed a self-addressed stamped envelope for your response to my request to conduct research at each middle school in the fall. Thank you for your assistance. I can be reached at 205-xxx-xxxx.

Sincerely,

Tamala R. Maddox

Enclosures (8)
APPENDIX D

RECRUITMENT LETTER TO PARTICIPANTS
Researcher’s Address

April 20, 2009

Dear Parent/Guardian:

I need your help. Please read this letter, sign, and return the attached Permission to Participate in the self-addressed stamped envelope provided.

Your child’s school has been chosen to participate in an educational research project. Tamala R. Maddox will be conducting a survey of students as part of her doctoral dissertation study at UAB. Seventh and eighth grade students were selected to participate in the study and will be asked to complete two survey instruments and a demographic questionnaire. These instruments will identify whether students feel they belong in the school and how this influences their motivation for personal achievement. Information gained from this project could potentially be beneficial to improving the achievement of students in your school.

Specific student information and information that may identify a specific school or school district will be kept strictly confidential, and at no time will the name of any student be included in the final report. Only Mrs. Maddox will see the forms completed by your child. After data is collected and analyzed, completed survey forms will be shredded.

Students will be asked to complete surveys during non-academic school times. Participation is completely voluntary, and no rewards or payments will be given for participation unless your child is selected for a face-to-face interview. The surveys will take approximately 45 minutes to complete. After surveys have been analyzed, 9-18 students will be selected for one face-to-face follow-up interview that will last approximately 60 minutes. The interview will give more depth to the study. Each participant chosen to be interviewed will receive a $5.00 gift card.

If you give permission for your child to participate in this project, please indicate your consent by completing and signing the attached form. Parental consent for this dissertation research project is voluntary, and there is no penalty to parents or children for not participating.

If you have questions, please contact Tamala R. Maddox at 205-xxx-xxx, Dr. Loucrecia Collins, UAB Dissertation Co-Chair, at 205-xxx-xxxx or Dr. Nataliya Ivankova, UAB Dissertation Co-Chair, at 205-xxx-xxxx.

Sincerely,

Tamala R. Maddox
Informed Consent

Title of Research: A Mixed Methods Inquiry Into the Relationship Between Belongingness and Achievement of Middle School Transfer Students

Protocol Number: X090604003

Investigator: Tamala R. Maddox

Sponsor: UAB Department of Educational Leadership

For Children/Minors (persons under 19 years of age) participating in this study, the term "You address" both the participant (student) and the parent or legally authorized representative (student's parent/guardian).

Explanation of Procedures:

The primary goal of this project is to determine whether your sense of belonging after transferring schools affects how you do in school. You will be asked to complete an information sheet (participant demographic sheet) and two short surveys that will measure your sense of belonging and motivation. Your responses on the surveys will be compared to your school records; your school lunch payment choice (free, reduced, full price), and who you live with (both parents, only one parent, your grandparents or other). There will be approximately 300 students in grades 7 and 8 contacted to be a part of this study. Based on the information we gather, we may ask you to participate in an additional interview, so that we can gather more specific information. This interview will be audio taped.

Risks and Discomforts:

The risk and discomforts from participating in this research are no greater than the risks and discomforts of day to day living.

Benefits:

You may not receive direct benefit from participating in this study. Information gained from this study may help improve the achievement of students in your school.

Alternatives:

The only alternative to participating in this study is not to participate.

Confidentiality:

Parent's Initials: 

Revisions Date: November 17, 2009
Information obtained about you for this study will be kept private to the extent allowed by law. However, research information that identifies you may be shared with the UAB Institutional Review Board (IRB) and others who are responsible for ensuring compliance with laws and regulations related to research, including people on behalf of the Office of Human Research Protections (OHRP). The results of the study may be published for scientific purposes. However, your identity will not be given out. Electronic data will be stored electronically on computers that are password protected. The primary investigator will have sole access to these passwords. Physical data including taped interviews will be stored in a locked metal file cabinet during the duration of the study and destroyed three years after the study completion.

Withdrawal from Study:
You are free to withdraw your consent and to discontinue participation in this project at any time. Your participation in this study may be ended without your consent if it is determined by the investigator that it is in your best interest.

Cost of Participating in Research:
There is no cost for participating in this study.

Payment for Participation in Research:
You will not be paid for participating in this study. You will be given a $5.00 gift card if you are chosen to be in the interview portion of this study.

Questions:
If you have any questions about the research Tamala R. Maddox will be glad to answer them. Mrs. Maddox's number is 205-965-0996. If you have any questions about your rights as a research participant, or concerns or complaints about the research, you may contact Ms. Sheila Moore. Ms. Moore is the Director of the Office of Institutional Review Board for Human Use (OIRB) at the University of Alabama at Birmingham (UAB). Ms. Moore can be reached at 205-934-3789 or 1-800-822-8816. If calling the toll-free number, press the option for “all other calls” or for an operator/attendant and ask for extension 4-3789. Regular hours for the Office of the IRB are 8:00 a.m. to 5:00 p.m. CT, Monday through Friday. You may also call this number in the event the research staff cannot be reached or you wish to talk to someone else.

Legal Rights:
You are not waiving any of your legal rights by signing this form.
Signature Page for Research Involving Children

You are making a decision whether or not to have your child participate in this study. Your signature indicates that you have decided to allow your child to participate and that you have read (or been read) the information provided above. Your signature gives the researcher access to your child’s report card and school lunch option information. You should keep a copy of this informed consent.

__________________________________________  ______________________ 
Signature Of Parent  
Or Legally Authorized Representative  Date

__________________________________________  ______________________
Signature of Principal Investigator  Date

Signature of Child or Minor

__________________________________________
(name of child/minor) has agreed to participate in research titled A Mixed Methods Inquiry Into the Relationship Between Belongingness and Achievement of Middle School Transfer Students.

__________________________________________  ______________________
Signature Of Child  Date
Assent Form

Title: A Mixed Methods Inquiry Into the Relationship Between Belongingness and Achievement of Middle School Transfer Students

Protocol Number: X090604003

Investigator: Tamala R. Maddox

Sponsor: UAB Department of Educational Leadership

The investigator named above is doing a research study.

There are some things you should know about the study:

We are asking you to be in a research study. Research helps us learn new things.

Whether or not to be in this research is your choice. You can say Yes or No. Whatever you decide is OK.

Why am I being asked to be in this research study?

You are being asked to be in the study because you have transferred to your middle school after the beginning of your 6th grade year.

What is the study about?

The primary goal of this project is to see if how you are doing in school is affected by whether or not you feel like you belong here.

What will happen during this study?

If you agree to be in this study, you will complete a form that asks some questions about you, and two surveys that ask about how you feel about your sense of belonging and how you learn. These will take about 45 minutes to finish.

You may be selected for a face to face one hour interview. If you agree, we will record your voice during the interview.

Consent Form Approval 12/11/09
Expiration Date 7/21/10

Revisions Date: November 17, 2009
Page 1 of 3
Participant's Initials: ____________________
Will the study hurt?

The study will not hurt.

What else should I know about the study?

You do not have to answer any questions that are asked of you.

What are the good things that might happen?

People may have good things happen to them because they are in a research study. These are called “benefits.” You may not benefit from participating in this study. Information gained from the study may help improve the achievement of students in your school.

What if I don’t want to be in this study?

You do not have to be in the study if you do not want to.

Who should I ask if I have any questions?

If you have any questions about this study, you or your parents can call Tamala R. Maddox at (205) 965-0096. If you have any questions about your rights as a research participant, or concerns or complaints about the research, you may contact Ms. Sheila Moore. Ms. Moore is the Director of the Office of the Institutional Review Board for Human Use (OIRB) at the University of Alabama at Birmingham (UAB). Ms. Moore may be reached at 205-934-3789 or 1-800-822-8816. If calling the toll-free number, press the option for “all other calls” or for an operator/attendant and ask for extension 4-3789. Regular hours for the Office of the IRB are 8:00 a.m. to 5:00 p.m. CT, Monday through Friday. You may also call this number in the event the research staff cannot be reached or you wish to talk to someone else.

Do I have to be in the study?

No, you do not have to be in the study. Even if you say yes now, you can change your mind later. It is up to you. No one will be mad at you if you don’t want to do this.
Now that I have asked my questions and think I know about the study and what it means, here is what I decided:

___________ OK, I’ll be in the study. ___________ No, I do not want to be in the study.

If you sign your name below, it means you agree to take part in this research study.

______________________________
Your Name (Printed)            Age            Date

______________________________
Your Signature                  Date

______________________________
Signature of Person Obtaining Consent            Date
APPENDIX F

PARTICIPANT DEMOGRAPHIC SHEET
Participant Demographic Sheet

Directions: These are questions about you, your school, and your family. Please answer each question correctly or check the correct answer. Thank you.

Participant’s name ________________________________ Gender  M ( ) F ( )

Participant’s address ________________________________________________

Contact number for participant or guardian

Home ________________ Cell ________________ Work ________________

E-mail Address ________________________________________________

Name of school you currently attend ________________________________

School history – list the school name

Kindergarten ________________________________________________

1stGrade ________________________________________________

2ndGrade ________________________________________________

3rdGrade ________________________________________________

4thGrade ________________________________________________

5thGrade ________________________________________________

6thGrade ________________________________________________

How old are you? ________________________________________________

Are you participating in any honors, advanced or enrichment classes? No ( ) Yes ( )

Whom do you live with?

Mother ( ) Father ( ) Mother and Father ( ) Grandparent(s) ( ) Other ( )

Which do you receive?

Free Lunch ( ) Reduced Lunch ( ) Full Price Lunch ( )
APPENDIX G

PERMISSION TO USE THE PSYCHOLOGICAL SENSE OF SCHOOL MEMBERSHIP SCALE
RE: Use of instrument

Goodenow, Carol S [CGoodenow@doe.mass.edu]

Sent: Tuesday, February 24, 2009 3:23 PM
To: Maddox, Tamala

Dear Ms. Maddox,

I was the person who developed the Psychological Sense of School Membership Scale, and you certainly have my permission to use it in your dissertation study.

Please let me know if you have further questions.

Regards,

Carol Goodenow, Ph.D.
Director, Coordinated School Health Programs
MA Dept of Elementary and Secondary Education
75 Pleasant Street
Malden, MA 02148
781-338-3603

-----Original Message-----
From: Maddox, Tamala [mailto:maddox@hoover.k12.al.us]
Sent: Tuesday, February 24, 2009 9:27 AM
To: Goodenow, Carol S
Subject: Use of instrument

Dr. Goodenow,

If you are "the" Dr. Carol Goodenow, author of Psychological Sense of School Membership Scale, I am keenly interested in using your instrument for my dissertation study. I would like to discuss this possibility with you in greater detail if you are the author. Thank you for your time.

Tamala R. Maddox
7th Grade Assistant Principal
Rumpus Middle School
205.439.2213
APPENDIX H

THE PSYCHOLOGICAL SENSE OF SCHOOL MEMBERSHIP SCALE
The Psychological Sense of School Membership (PSSM) Scale

The first question is an example.

I like strawberry ice cream.

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Here are some questions about you as a student at this school. Please circle the number that best describes what you think.

I feel like a real part of (name of school).

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People here notice when I’m good at something.

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It is hard for people like me to be accepted here. *(reversed)*

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Other students in this school take my opinions seriously.

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Most teachers at (name of school) are interested in me.

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Sometimes I feel as if I don’t belong here. *(reversed)*

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There’s at least one teacher or other adult in this school I can talk to if I have a problem.

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People at this school are friendly to me.

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Teachers here are not interested in people like me. (reversed)

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I am included in lots of activities at (name of school).

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I am treated with as much respect as other students.

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I feel very different from most other students here. (reversed)

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I can really be myself at this school.

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The teachers here respect me.

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People here know I can do good work.

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I wish I were in a different school. *(reversed)*

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I feel proud of belonging to *(name of school)*.

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</tbody>
</table>

Other students here like me the way I am.

<table>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>NOT AT ALL</td>
<td>SOMEWHAT</td>
<td>TRUE</td>
<td>VERY TRUE</td>
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<tr>
<td>2</td>
<td>TRUE</td>
<td>VERY TRUE</td>
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</tbody>
</table>
APPENDIX I

PERMISSION TO USE THE PATTERNS OF ADAPTIVE LEARNING SURVEY
Hi Tamala,
I apologize for the delay in responding. I was away at a research conference last week. The Pattern of Adaptive Learning Survey (PALS) is available on our website www.umich.edu/~pals/pals. You have permission to use scales from the survey in your research. I would be glad to talk with you further to answer any questions you have about the survey as you proceed with your research.
Best regards,
Michael Middleton

Quoting "Maddox, Tamala" <tmaddox@hoover.k12.al.us>:

> Good afternoon,
> I am a doctoral student at University of Alabama - Birmingham seeking permission to use your instrument as a part of my data collection for my mixed methods dissertation study. May I contact you directly to discuss this possibility?
> Thank you for your time.
>
> Tamala R. Maddox
> 7th Grade Assistant Principal
> R. F. Bumpus Middle School
> 205.439.2213
>

******************************
Michael Middleton, PhD
Associate Professor
Department of Education
University of New Hampshire
Durham, NH 03824
(603) 862-7654
Maddox, Tamala

From: Avi Kaplan [akaplan@bgu.ac.il]
Sent: Monday, April 13, 2009 6:30 PM
To: Maddox, Tamala
Subject: RE: PALS instrument

Dear Tamala,

The PALS is available for use, conditional on the appropriate citation of its source in any work you produce that is based on it.

You can find the instrument and the manual under the following link: [www.unr.edu/~pale](http://www.unr.edu/~pale)

Good luck with your work,

Avi

From: Maddox, Tamala [tmellultr.maddox@ipower.k12.al.us]
Sent: Tuesday, April 14, 2009 1:23 AM
To: akaplan@bgumail.bgu.ac.il
Subject: PALS instrument

Good afternoon,

I am a doctoral student at University of Alabama – Birmingham seeking permission to use your instrument as a part of my data collection for my mixed methods dissertation study. May I contact you directly to discuss this possibility?

Thank you for your time.

Tamala K. Maddox
7th Grade Assistant Principal
R. F. Bumpus Middle School

2009.4.10.22.15
APPENDIX J

THE PATTERNS OF ADAPTIVE LEARNING SURVEY
PALS – Patterns of Adaptive Learning Survey

The first question is an example.

I like strawberry ice cream.

<p>| | | | | | |</p>
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</table>

Here are some questions about you as a student at this school. Please circle the number that best describes what you think.

**Mastery Goal Orientation**

It’s important to me that I learn a lot of new concepts this year.

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One of my goals in class is to learn as much as I can.

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</table>

One of my goals is to master a lot of new skills this year.

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It’s important to me that I thoroughly understand my class work.

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</table>

It’s important to me that I improve my skills this year.

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</table>
**Performance-Approach Goal Orientation**

It’s important to me that other children in my class think I am good at my class work.

<table>
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<tr>
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<th>2</th>
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<td><strong>NOT AT ALL</strong></td>
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<td>VERY TRUE</td>
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</tbody>
</table>

One of my goals is to show others that I’m good at my class work.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
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<td><strong>NOT AT ALL</strong></td>
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<td>VERY TRUE</td>
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</tbody>
</table>

One of my goals is to show others that class work is easy for me.

<table>
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</table>

One of my goals is to look smart in comparison to the other students in my class.

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<thead>
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<td><strong>TRUE</strong></td>
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<td></td>
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<td></td>
<td>VERY TRUE</td>
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</tbody>
</table>

It’s important to me that I look smart compared to others in my class.

<table>
<thead>
<tr>
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<th>1</th>
<th>2</th>
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</table>

**Performance-Avoid Goal Orientation**

It’s important to me that I don’t look stupid in class.

<table>
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<td>VERY TRUE</td>
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</tbody>
</table>

One of my goals is to keep others from thinking I’m not smart in class.

<table>
<thead>
<tr>
<th></th>
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<th>4</th>
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<tr>
<td><strong>TRUE</strong></td>
<td></td>
<td></td>
<td></td>
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<td>VERY TRUE</td>
</tr>
</tbody>
</table>
It’s important to me that my teacher doesn’t think that I know less than others in my class.

<table>
<thead>
<tr>
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<td>SOMEWHAT TRUE</td>
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One of my goals in class is to avoid looking like I have trouble doing the work.

<table>
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<tr>
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<tbody>
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<td>NOT AT ALL</td>
<td>TRUE</td>
<td>SOMEWHAT TRUE</td>
<td>VERY TRUE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX K

INITIAL LINEAR EQUATIONS USED TO REPRESENT STRUCTURAL EQUATION MODEL PATHS
4.1. Tachieve = ptachieveeth1 eth1 + ptachieveeth2 eth2 + ptachieveeth3 eth3 + 
ptachievemotivation motivation + ptachievegender gender + ptachievefrl1 frl1 + 
ptachievefrl2 frl2 + ptachievebelong_totbelong_tot + e1

4.2. Motivation = pmotivationbelong_totbelong_tot + e2

4.3. Belong_tot = pbelong_toteth1 eth1 + pbelong_toteth2 eth2 + pbelong_toteth3 eth3 
+pbelong_totmotivation motivation + pbelong_totgender gender + pbelong_totfrl1 frl1 + 
pbelong_totfrl2 frl2 + e3
APPENDIX L

SAS v.9.3 PROC CALIS OUTPUT
Initial Model

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

<table>
<thead>
<tr>
<th>Variables</th>
<th>9</th>
<th>Model Matrices</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observations</td>
<td>167</td>
<td>Model Terms</td>
<td>1</td>
</tr>
<tr>
<td>Informations</td>
<td>45</td>
<td>Parameters</td>
<td>32</td>
</tr>
</tbody>
</table>

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Fit Function | 0.1462
Goodness of Fit Index (GFI) | 0.8704
GFI Adjusted for Degrees of Freedom (AGFI) | 0.8075
Root Mean Square Residual (RMR) | 0.3122
Standardized Root Mean Square Residual (SRMR) | 0.0470
Parsimonious GFI (Mulaik, 1989) | 0.1886
Chi-Square | 24.2625
Chi-Square DF | 7

Pr> Chi-Square | 0.0010

Independence Model Chi-Square | 173.66
Independence Model Chi-Square DF | 36
RMSEA Estimate | 0.1219
RMSEA 90% Lower Confidence Limit | 0.0712
RMSEA 90% Upper Confidence Limit | 0.1765
ECVI Estimate | 0.5564
ECVI 90% Lower Confidence Limit | 0.5255
ECVI 90% Upper Confidence Limit | 0.7129
Probability of Close Fit | 0.0127

Bentler's Comparative Fit Index | 0.8746
Normal Theory Reweighted LS Chi-Square | 23.0468
Akaike's Information Criterion | 18.5634
Bozdogan's (1987) CAIC | 10.2625
Schwarz's Bayesian Criterion | -11.5634
McDonald's (1989) Centrality | 0.9496
Bentler&Bonett's (1980) Non-normed Index | 0.3551
Bentler&Bonett's (1980) NFI | 0.8603
James, Mulaik, & Brett (1982) Parsimonious NFI | 0.1673
Z-Test of Wilson & Hilferty(1931) | 3.0595
Bollen (1986) Normed Index Rho1 | 0.2815
Bollen (1988) Non-normed Index Delta2 | 0.8964

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Manifest Variable Equations with Estimates

TACHIEVE = -0.8837*MASTERY + 0.1740*belong_tot -5.3200*eth1

ptachieve_mastery | 0.9561
ptachieve_belong_tot | 0.0479
ptachieve_eth1 | 1.3822

-5.1440*eth2 + 1.3222*eth3 -1.5085*FRL1 + 1.5176*FRL2

ptachieve_eth2 | 2.4093
ptachieve_eth3 | 2.7381
ptachieve_FRL1 | 1.4605
ptachieve_FRL2 | 2.1016

-2.1351
0.5408
-1.0328
0.7221

-0.0840*GENDER + 1.0000 e1

1.0147 ptachieve_gender -0.8357

MASTERY = -0.0287*belong_tot + 1.0000 e2

pmastery_belong_tot | 0.0226

belong_tot | 14.9221

-6.9949*eth1 -7.8214*eth2

pbelong_tot_mastery | 6.1850
pbelong_tot_eth1 | 2.5660
pbelong_tot_FRL1 | 4.3481

-6.9949
2.5660
4.3481

+ -5.5651*eth3 + -1.9129*FRL1 -1.3238*FR12 -0.8480*GENDER

pbelong_tot_eth3 | 4.9141
pbelong_tot_FRL1 | 3.7596
pbelong_tot_FRL2 | 1.0147

2.6135
3.7596
1.0147

-0.7343
-0.3524
-0.8357

+ 1.0000 e3
Squared Multiple Correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>Error Variance</th>
<th>Total Variance</th>
<th>R-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>TACHIEVE</td>
<td>54.41058</td>
<td>71.56862</td>
<td>0.2397</td>
</tr>
<tr>
<td>MASTERY</td>
<td>0.66336</td>
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<td></td>
</tr>
<tr>
<td>belong_tot</td>
<td>173.69410</td>
<td>165.31029</td>
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</table>

Second Model

The CALIS Procedure

Covariance Structure Analysis: Maximum Likelihood Estimation

Observations: 167
Variables: 6
Model Terms: 1
Model Matrices: 4

Informations: 21
Parameters: 13

The CALIS Procedure

Covariance Structure Analysis: Maximum Likelihood Estimation

Pr> Chi-Square: <.0001
Independence Model Chi-Square: 108.46
Independence Model Chi-Square DF: 15

RMSEA Estimate: 0.1829
RMSEA 90% Lower Confidence Limit: 0.1280
RMSEA 90% Upper Confidence Limit: 0.2524
ECVI Estimate: 0.3215
ECVI 90% Lower Confidence Limit: 0.2697
ECVI 90% Upper Confidence Limit: 0.4707
Probability of Close Fit: 0.0005

Bentler's Comparative Fit Index: 0.7622
Akaike's Information Criterion: 18.2221
Bozdogan's (1987) CAIC: 1.7501
Schwarz's Bayesian Criterion: 5.7581
McDonald's (1989) Centrality: 0.9356
Bentler&Bonett's (1980) Non-normed Index: 0.1084
Bentler&Bonett's (1980) NFI: 0.7582
James, Mulaik, & Brett (1982) Parsimonious NFI: 0.2022
Z-Test of Wilson & Hilferty (1931): 3.9334

Bollen (1986) Normed Index Rho1: 0.6934
Bollen (1988) Non-normed Index Delta2: 0.7873

The CALIS Procedure

Covariance Structure Analysis: Maximum Likelihood Estimation

Manifest Variable Equations with Estimates

TACHIEVE = 0.1568*belong_tot + -5.5775*eth1 + -5.1878*eth2

Std Err: 0.0454

ptachievebelong_tot: 1.2797
ptachieveeth1: 2.3464
ptachieveeth2: 2.3464

T Value: 3.4573

+ -1.6594*FRL1 + 1.0000 e1
1.3734 ptachieveFRL1
-1.2082

MASTERY = -68.1201*belong_tot + 1.0000 e2

Std Err: 3.7386

pmastrybelong_tot: 1.0000
t Value: -18.2209
belong_tot = -6716.4*MASTERY + 889.7*eth1 + -110.5*FRL1
Std Err 368.6 belong_totmas 685.8 belong_tote th1 743.6 belong_totfrl1
t Value -18.2209 1.2973 -0.1485
+ 1.0000 e3

Squared Multiple Correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>Error Variance</th>
<th>Total Variance</th>
<th>R-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 TACHIEVE</td>
<td>55.95162</td>
<td>69.76181</td>
<td>0.1980</td>
</tr>
<tr>
<td>2 MASTERY</td>
<td>760102</td>
<td>0.40079</td>
<td>-1896486</td>
</tr>
<tr>
<td>3 belong tot</td>
<td>17893060</td>
<td>163.80344</td>
<td>-109234</td>
</tr>
</tbody>
</table>

Final Model

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Observations 167  Model Terms 1
Variables 6  Model Matrices 4
Informations 21  Parameters 12

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Fit Function
-0.0442
Goodness of Fit Index (GFI) 0.9858
GFI Adjusted for Degrees of Freedom (AGFI) 0.9404
Root Mean Square Residual (RMR) 0.0442
Squared Multiple Correlations
Error Total R-Square
1 TACHIEVE 55.95162 69.76181 0.1980
2 MASTERY 760102 0.40079 -1896486
3 belong tot 17893060 163.80344 -109234

Pr> Chi-Square 0.1967
Independence Model Chi-Square 108.46
Independence Model Chi-Square DF 15

RMSEA Estimate 0.0531
RMSEA 90% Lower Confidence Limit
RMSEA 90% Upper Confidence Limit 0.1289
ECVI Estimate 0.1952
ECVI 90% Lower Confidence Limit 0.2910
ECVI 90% Upper Confidence Limit Probability of Close Fit 0.3995
Bentler’s Comparative Fit Index 0.9750
Akaike’s Information Criterion 7.1746
Bozdogan’s (1987) CAIC -23.2514
Schwarz’s Bayesian Criterion -18.2514
McDonald’s (1989) Centrality 0.9930
Bozdogan’s (1980) Non-normed Index 0.9249
Bentler&Bonett’s (1980) NFI 0.9323
Bentler&Bonett’s (1980) Parsimonious NFI 0.3188
James, Mulaik, & Brett (1982) Parsimonious NFI 0.8580
Z-Test of Wilson & Hilferty (1931) 0.7970
Bollen (1988) Non-normed Index Delta2 0.9774
Hoelter’s (1983) Critical N 252

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Manifest Variable Equations with Estimates

TACHIEVE = 0.1568*belong_tot + -5.5775*eth1 + -5.1878*eth2
Std Err 0.0464 ptachievebelong_tot 1.2879 ptachieveeth1 2.3464 ptachieveeth2
t Value 3.3830 -4.3307 -2.2110
\[ \text{MASTERY} = 0.0136 \times \text{belong_tot} + 1.0000 \times e2 \]

\[ \text{belong_tot} = -3.1333 \times \text{eth1} - 3.8471 \times \text{FRL1} + 1.0000 \times e3 \]

**Squared Multiple Correlations**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Error Variance</th>
<th>Total Variance</th>
<th>R-Square</th>
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<tbody>
<tr>
<td>1 TACHIEVE</td>
<td>55.05162</td>
<td>72.02332</td>
<td>0.2231</td>
</tr>
<tr>
<td>2 MASTERY</td>
<td>0.37024</td>
<td>0.40048</td>
<td>0.0755</td>
</tr>
<tr>
<td>3 belong_tot</td>
<td>156.83444</td>
<td>163.81726</td>
<td>0.0426</td>
</tr>
</tbody>
</table>
APPENDIX M

INTERVIEW PROTOCOL
Interview Protocol

Investigator (I): Thank you for taking time out of your busy schedule to speak with me today. The interview you are participating in will be recorded and transcribed word-for-word. The transcription will then be sent to you for your review. You may then choose to accept, reject or edit the wording of the transcript. If you reject the transcription of your interview, you will be released from the study. Please remember that this interview is confidential. A pseudonym will be used in place of your name in the study. Please do not hesitate to interrupt me if you need clarification about a question or if I need to repeat a question. Are you ready to begin?

I: Tell me about yourself.

I: Tell me about your family.

I: Will you describe your previous school before coming to [new school]?

I: Tell me about your transition/transfer experience to [new school].

I: Did you have siblings who transferred to the elementary or high school when you transferred?

I: If so, tell me about their experience(s).

I: How is [new school] like your previous school?

I: How is [new school] different from your previous school?

I: How do you feel about [new school]?

I: How do you feel about being or not being part of [new school]?
I: What makes you feel like you are a part/not a part of [new school]?

I: Do you feel like you can be yourself at [new school]?

I: How do other students and the teachers accept you?

I: Do you feel like other students and teachers accept you for who you are?

I: Who was most welcoming to you at [new school], students or teachers?

I: Explain how.

I: How do you feel other students and teachers treat you?

I: Do you feel like other students and teachers treat you with respect?

I: How similar or different to other students do you feel yourself at [new school]?

I: What changes would you suggest to make [new school] better for you?

I: How has your academic performance been affected by your relationship with students and teachers at this school?

I: How do you think you were academically prepared for [new school]?

I: What are academic differences, if any, between [new school] and your previous school? If any, could you identify some?

I: Do you have any questions for me or is there anything you want to add that has not been mentioned?

I: Thank you for agreeing to participate in this interview. All of the information you have shared will be managed with strict confidence. Would you mind if I contacted you later with other questions or for clarification of some of your answers?

This will end the interview.
APPENDIX N

CODES AND THEMES FROM PARTICIPANT INTERVIEWS
Themes

Similarity to previous school
Size

Configuration
classrooms

Environment
community

ting

Academic preparation
school

cult”

Involvement in new school
Extracurricular
Academic
Athletic

school term

Student Personality

Process of Transition to New School
Outlook toward transition
Positive
Negative
Accustomed to moving

Codes

Larger
“Smaller version of current

“New school was more diffi-

“On a different level”
Had to “step it up”

No advanced classes in previous
Bigger homework load

“New school was more diffi-

“On a different level”
Had to “step it up”

Math Team
Sports beginning before

Activities with later starts
Unable to participate

Outgoing
Shy

Made decision with mom to

Left familiar peers
“Didn’t want to come”
“I move a lot.”
Been to several schools
<table>
<thead>
<tr>
<th>Time of transition</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Entered first day</td>
<td>False assumptions</td>
</tr>
<tr>
<td>Entered later in the school year</td>
<td>“Hard to fit in”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transitional Support</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship with teachers</td>
<td>Wanted you to feel welcomed</td>
</tr>
<tr>
<td></td>
<td>Supportive</td>
</tr>
<tr>
<td></td>
<td>Cared more</td>
</tr>
<tr>
<td></td>
<td>Others received more help</td>
</tr>
<tr>
<td>Relationship with peers</td>
<td>Welcoming</td>
</tr>
<tr>
<td></td>
<td>Felt different from peers</td>
</tr>
<tr>
<td></td>
<td>No supportive group</td>
</tr>
<tr>
<td></td>
<td>Felt judged</td>
</tr>
<tr>
<td></td>
<td>Not a lot in common</td>
</tr>
<tr>
<td></td>
<td>No one picked on me</td>
</tr>
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</table>

| Family support                             | Parents involved |

*Note: Codes listed in quotations represent the actual words of interview participants.*