A LOGIC MODEL PROGRAM EVALUATION:
EXAMINING THE OUTCOMES OF ACADEMIC PERFORMANCE AND PERSISTENCE TOWARDS GRADUATION OF AT-RISK STUDENTS ENROLLED IN THE ACADEMIC CENTER.

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Doctor of Philosophy

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By

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December 2011
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A LOGIC MODEL PROGRAM EVALUATION:
EXAMINING THE OUTCOMES OF ACADEMIC PERFORMANCE AND PERSISTENCE TOWARDS GRADUATION OF AT-RISK STUDENTS ENROLLED IN THE ACADEMIC CENTER.

Presented by Darci McCannon-Humphrey, a candidate for the degree of Doctor of Philosophy, and hereby certify that in their opinion it is worthy of acceptance.

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Chapter One

BACKGROUND OF THE STUDY

Introduction

The transition to high school is a stressful phase for all students, even those who have parental support and solid academic backgrounds. This transition may introduce changes in environment, education practices, and social structures to which the student must adapt (Akos & Galassi, 2004; Mizelle, 2005; Rice, 1997; Smith, 1997). For those students considered at-risk, the transition is made even more complicated. Students who have a difficult transition to high school often drop out shortly after entering high school or fall behind and fail to graduate on time (Akos & Galassi, 2004). According to the National Center for Educational Statistics (2007), in 2000, 86.5% of all 18- through 24-year-olds had completed high school. This percentage has remained fairly constant since the 1990s. Each year approximately 5% of young adults enrolled in high school drop out. Prevention programs targeting at-risk students focus on academics, family, and/or structural changes within the school (Akos & Galassi, 2004; Chapman & Sawyer, 2001; Fairbrother, 2008; Herlihy, 2007; Mizelle, 2005; Smith; 1997). Many prevention programs also have an affective element that promotes positive relationships between students and teachers or staff (Dynarski & Gleason, 1999; Lehr, Johnson, Bremer, Cosio, & Thompson, 2004). The economic and social consequences connected to this problem provide the impetus for development of programs to decrease the dropout rate, and studying the outcomes of such programs is imperative.

This first chapter includes a discussion of the contextual framework, purpose of the study, and a background section on the development of an Academic Center focused on the transition to high school for at-risk students. Research questions and research methods will be
briefly introduced along with an overview of the limitations and significance of the current study. The chapter will conclude with definitions of terms and a chapter summary.

Framework

U.S. education has functioned with essentially the same structure for over a century. This framework is built upon the development of the Common School. The Common School concept was conceived by Horace Mann in the 1830s, “to unify the heterogeneous population” (Fowler, 2004, p. 333). The patterns advocated by the Common School movement -- regular school attendance, longer school years, improved occupational status for teachers, teacher training -- are reoccurring issues that are analyzed and debated currently. According to Fowler, as in the past, individuals and groups today who are dissatisfied with educational outcomes have looked to policy to help restructure and redesign the school system. Currently, much of the educational restructuring and redesign aimed at improving educational outcomes have come about because of the No Child Left Behind Act of 2001 (NCLB).

The goal of NCLB is to improve elementary and secondary education through increased accountability measures. To accomplish this each state is required to measure proficiency levels of students in math and reading at a variety of grade levels. Using these data, states must then determine if each individual school is making adequate yearly progress (AYP) towards the goal of having 100% of students meet state academic standards. Schools that do not meet AYP for two consecutive years will be considered low performing schools.

Four key principles or pillars guide NCLB regulations (United States Department of Education, 2004). These four pillars include: (a) accountability “to close the achievement gap and make sure all students, including those who are disadvantaged, achieve academic proficiency” (United States Department of Education, 2004); (b) flexibility so local school
districts can decide how best to use federal funds; (c) school choice for parents of students attending low performing or failing schools; and (d) an emphasis on methodologically sound teaching strategies. The enactment of NCLB has changed the national policy environment for schools; in Missouri, the Missouri Assessment Program (MAP) has changed the assessment environment for schools at the state level.

The MAP is a performance based assessment test that not only assesses students’ knowledge and skills, but how they can apply that knowledge to new situations. Under NCLB each state must determine if each individual school is making adequate yearly progress (AYP) toward the goal of having 100% of students meet state academic standards. In Missouri those standards are assessed by the MAP. In addition to assessing academic standards NCLB requires schools to report the percentage of students who graduate with a regular diploma in four years. Assessment measures and their outcomes have also increased attention “to the need for educational decisions to be grounded in scientifically-based evidence,” (Lehr, 2004, p. 1). The cost of implementing policies and programs without such empirical data is high.

As this study is a program evaluation of a transition program for at-risk students, a logic model evaluation approach will be utilized. The outcome elements of the logic model will be used as the foundations of the research questions. Many schools have implemented changes in programming in accordance with and in response to NCLB policies and MAP data. These programs should be evaluated in order to see if they are effectively meeting the needs of both the student and the demands constructed by the policy environments.

Purpose

The purpose of this study is to conduct a program evaluation of a transitional support program, specifically examining the outcomes of academic performance and persistence to
graduation of at-risk students who participate in the transitional support program (Academic Center) as compared to at-risk students who do not participate. In order to gain perspective and understanding of the structure and goals of the Academic Center, an overview of the development of the program will be provided along with a detailed program outline. Information concerning the development of the program, selection processes, and program format was obtained from institutional records and artifacts and personal communications.

Background

Conversations concerning drop out statistics at Mid-Town High School had occurred for around 5 years during the late 1990s between a group of concerned teachers and administrators. With a new administration in Washington promising major education reform, these individuals felt it advantageous to be proactive rather than reactive in their response to the national initiative. A review of national statistics concerning drop out rates, employment prospects for dropouts, and incarceration rates moved the issue from discussion to program development for students at risk of dropping out.

Those participating in the development of the program asserted that the program was needed due to a number of factors:

- Transition from ninth to tenth grade is often a problematic experience for many. Mid-Town High School is a very large, complex school that can seem overwhelming for some students.
- Students entering tenth grade with less than the expected number of credits are at a disadvantage when compared to their peers.
- This disadvantage forces at-risk students to somehow squeeze the “missing” courses and yearly required courses into their daily schedule.
If additional academic failure is experienced the “catch up” cycle is compounded. A program was therefore needed to provide a structured, supportive academic environment for tenth grade students considered at-risk of academic failure.

In order to accomplish this, the Academic Center was developed. The center would provide at-risk students with immediate intervention to promote future success in school and to prevent the perpetual catch up cycle. Daily student contact would allow for the facilitation of a systematic plan for dealing with the academic demands of each school day, to provide individualized or small group tutoring to reinforce concepts taught in class, and time to complete homework. The following arrangement was proposed to the staff of Mid-Town High School for their approval during the 1998-1999 school year.

The Academic Center would be a 2-hour structured homework clinic with a full time staff of 3 serving 20 students at a time. Students may enroll for one block only; however, three blocks are available: 1 / 2 hour, 3 / 4 hour, and 6 / 7 hour. Students would engage in study skills, counseling, and career planning activities. This set up was seen as advantageous as students could catch up on credits while still focusing on the content areas since they earn 1 credit/semester for the Center. Students would be able to develop a stable relationship with a positive adult mentor. Core teachers would also have more quality teaching time since normally “difficult” students would be prepared for class and ready to learn. Core teachers were asked to provide academic staff with daily assignments and unit themes through email or handout. The proposed programming was presented to staff during faculty meetings and staff was asked to vote on their support of the program. Staff support was evident, so the Academic Center was established at the start of the 2000-2001 school year.
As stated before, the Academic Center is a 2-hour, in-school, academic intervention program for 10th grade students who have been identified as at-risk of school failure in the 9th grade. Enrolled students work on core content class work and develop skills necessary to continue their education. Students are identified for program consideration based on 9th grade counselor, teacher, and administrative evaluation. The district uses no specific criteria to identify students for consideration, nor does it have a definition of at-risk students. Individuals participating in the identification process usually recognize students that exhibit any number of characteristics linked to at-risk identification. These characteristics include: low socioeconomic status (SES), low grade point average (GPA), low attendance, high number of disciplinary referrals, mental health issues, behavior issues, family concerns, drug use, social maladjustment, or juvenile record. This referral process thus shapes the population of students who are referred to the Academic Center in complex ways. Once a list of students has been generated for consideration the identification team focuses on students with an 80-85% or better attendance rate and limited discipline referrals for nomination.

Once identified, all students meet with the Academic Center guidance counselor for a general informational meeting. During this meeting students are provided with an overview of the program along with program goals. The Academic Center focuses on four major areas of growth and development: academics, career exploration, social and emotional development, and healthy lifestyle choices. After the informational meeting, students decide whether or not they will continue with the placement process. If they decide to continue then the individual interview is the next step.

During a one-on-one interview with the Academic Center guidance counselor, students are informed about general class expectations and once again given an overview of the program.
Students are told that individualized and small group tutoring is available as well as other resources necessary to complete assignments and ensure progress towards graduation. Students are then asked to tell a little about themselves, discuss future goals, and state how participation in the Academic Center could help them achieve those goals. The interviewer explains that student enrollment in the Academic Center and the credit earned is dependent on the student taking an active role in his or her education. This means class participation and compliance with the expectations of the program. A class syllabus is provided to the student for the student to review (see Appendix A). The interviewer then asks the student if he or she has any questions. After the initial interview, should a student decide that he or she would like to participate in the Academic Center, they are asked to sign a contract agreeing to comply with the expectations of the program. The individual interview is the final factor in determining placement. Approximately 75% of students who interview for the program are actually enrolled in the program the following year (Academic Center counselor, personal communication, February 3rd, 2010). It should also be noted that students who are recommended but decide not to interview or interview and decide not to enroll still have the opportunity to seek placement once reaching high school.

At this time there are three assigned Academic Center staff members; two teach in the program and the third coordinates program placement and also works as the guidance counselor for all students placed in the program. A typical day in the Academic Center is illustrated under the daily schedule/procedures section of the “Guidelines and Expectations” handout (see Appendix A). In addition students are encouraged to plan their day, organize homework, and participate in study skill sessions, counseling, and career planning activities.

This is a program evaluation study using a logic model evaluation approach. Many schools have implemented changes in programming in accordance with and in response to
NCLB policies and MAP data. Programs, such as the Academic Center, need to be evaluated in order to see if they are effectively meeting the needs of both the student and the demands constructed by the policy environments.

Research Questions

R1-What criteria are used to identify 9th graders for referral to the Academic Center?

R2- Are the graduation rate mean scores of at-risk students participating in the Academic Center during their transition to high school different from at-risk students who do not participate?

H₀²-There is no significant difference between the graduation rate mean scores of at-risk students participating in the Academic Center during their transition to high school and at-risk students who do not participate.

R3- Are the exit GPA mean scores of at-risk students participating in the Academic Center during their transition to high school different from at-risk students who do not participate when students are matched according to pre-entry characteristics (ethnicity, gender, and FRL status)?

H₀³-There is no significant difference between the exit GPA mean scores of at-risk students participating in the Academic Center during their transition to high school and at-risk students who do not participate when matched according to pre-entry characteristics (ethnicity, gender, and FRL status).
R4- Are the exit GPA mean scores of at-risk students participating in the Academic Center during their transition to high school different from at-risk students who do not participate when the pre-entry characteristic of freshman GPA is controlled?

H_{04}-There is no significant difference between the exit GPA mean scores of at-risk students participating in the Academic Center during their transition to high school and at-risk students who do not participate when the pre-entry characteristic of GPA is controlled.

Methods

This study will employ a quasi-experimental design using data from a single large 10th-12th grade high school in the Midwest. It should be noted that the researcher did not design and implement the intervention and had no control over the population and sample selection because students were assigned to the Academic Center prior to the beginning of the study. Initially, 138 students were identified as at-risk based on 9th grade counselor, teacher, and administrative evaluation during the 2005-2006 school year. The following school year 2006-2007, 70 students were identified as at-risk. Out of the 138 identified students from school year 2005-2006, 54 were placed in the Academic Center. Out of the 72 identified students from school year 2006-2007, 10 were placed in the Academic Center.

Data collected for this study come from institutional records and guidance counselor interviews. Three statistical analyses were utilized in this study. Research question two was answered with a chi-square test of independence. Research question three was answered with a paired samples t-test. The final research question was answered with an ANCOVA. The independent variables in this study include GPA end of freshman year, free and reduced lunch (FRL) participation, Academic Center participation, gender, and ethnicity. The dependent
variables in this study will be exit GPA at the time the student drops out or when the student graduates and persistence to graduation. A detailed review of the research methods used in this study will be presented in Chapter Three.

Limitations

Focus on one institution limits the ability to generalize findings to other institutions. This particular high school transitions at the 10th grade level. Many other high schools around the United States transition at the 9th grade level. Secondly, the Academic Center, the transition program being evaluated, is a program unique to this particular high school, making comparisons to other transitional support programs difficult. Third, the process of assigning students to the Academic Center was complex and did not rely entirely on quantitative indicators. This presents a limitation because unknown characteristics of the population may influence the findings. However, since there are limited numbers of studies that examine transition programs for at-risk students at the high school level and none that use the logic model approach to evaluate transition programs for at-risk students at the high school level, any new studies in the area will help advance the knowledge base and perhaps inspire future research in this area.

Significance of Current Study

The rationale for undertaking an evaluative study of a transition program specifically designed for at-risk students and their persistence towards graduation is grounded in the social and economic prospects for those students who decide for any number of reasons not to continue their education. Statistics concerning personal income, health, and welfare of high school dropouts are dismal when compared to others with higher educational attainment.

Personal income and employment prospects for high school dropouts are ominous. According to the Alliance for Excellent Education (2003c) in today's workplace, only 40% of
adults who dropped out of high school are employed, compared to 60% of adults who completed
high school and 80% for those with a bachelor's degree. Employment projections indicate that
jobs requiring only a high school degree will grow by just 9% by the year 2008 while those
requiring a bachelor's degree will grow by 25% (Alliance for Excellent Education, 2003e).
Minority students who drop out of high school face even greater hurdles. Statistics from Table 1
show that salary differentials for minority students who do not graduate high school are low
when compared to those with higher educational attainment.
Table 1

Average Earnings in 2003 by Educational Attainment, Sex, Race, and Origin for all Workers, 18 Years and Over

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Total</th>
<th>Not a High School Graduate</th>
<th>High School Graduate</th>
<th>Some College or Associate’s Degree</th>
<th>Bachelor’s degree</th>
<th>Advanced Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>$36,308</td>
<td>$18,826</td>
<td>$27,280</td>
<td>$31,046</td>
<td>$51,194</td>
<td>$72,824</td>
</tr>
<tr>
<td>Men</td>
<td>$44,310</td>
<td>$22,091</td>
<td>$32,673</td>
<td>$38,377</td>
<td>$63,503</td>
<td>$90,761</td>
</tr>
<tr>
<td>Women</td>
<td>$27,271</td>
<td>$13,459</td>
<td>$21,141</td>
<td>$23,905</td>
<td>$37,909</td>
<td>$50,756</td>
</tr>
<tr>
<td>White Alone</td>
<td>$37,376</td>
<td>$19,264</td>
<td>$28,145</td>
<td>$31,878</td>
<td>$52,479</td>
<td>$73,870</td>
</tr>
<tr>
<td>Non-Hispanic-white alone</td>
<td>$39,220</td>
<td>$19,423</td>
<td>$28,756</td>
<td>$32,318</td>
<td>$53,185</td>
<td>$74,122</td>
</tr>
<tr>
<td>Black Alone</td>
<td>$28,179</td>
<td>$16,516</td>
<td>$22,823</td>
<td>$27,626</td>
<td>$42,285</td>
<td>$59,944</td>
</tr>
<tr>
<td>Asian Alone</td>
<td>$40,793</td>
<td>$16,746</td>
<td>$24,900</td>
<td>$27,304</td>
<td>$46,628</td>
<td>$72,852</td>
</tr>
<tr>
<td>Hispanic (of any race)</td>
<td>$25,824</td>
<td>$18,981</td>
<td>$24,163</td>
<td>$27,575</td>
<td>$40,949</td>
<td>$67,679</td>
</tr>
</tbody>
</table>


Foregone wages over a lifetime are not the only problem high school dropouts face; health and welfare issues also plague this group. According to the Alliance for Excellent Education (2003b), teen girls in the bottom 20% of basic reading and math skills are five times more likely to become mothers over a 2-year high school period than teen girls in the top 20%, and both male and female students with low academic achievement are twice as likely to become parents by their senior year of high school compared to students with high academic
achievement. Economic troubles are not the only difficulty experienced by a drop out. Many are at risk for increased involvement with law enforcement. According to one study, high school dropouts are 3.5 times more likely than high school graduates to be arrested in their lifetime (Alliance for Excellent Education, 2003a).

Higher arrest rates for high school dropouts lead to higher incarceration rates. According to Harlow (2003), a Bureau of Justice statistician, 75% of America's state prison inmates are high school dropouts and 59% of America's federal prison inmates did not complete high school. Focusing on graduation rates would also have a significant impact on incarceration costs. According to the Alliance for Excellent Education (2003a), a 1% increase in high school graduation rates would save approximately $1.4 billion in incarceration costs, or about $2,100 per each male high school graduate.

The literature has illustrated that issues concerning at-risk students, dropout prevention, and the transition itself to high school are broad in scope. Educational practices, social structures, and even school environment all contribute to students’ successful or unsuccessful transition to high school. This study will evaluate a transition program specifically designed to address those issues to see if the anticipated positive outcomes are achieved and if at-risk students benefit from participation.

Definitions

A few terms used in this study have varying definitions across the PK-12 educational community and within the PK-12 educational literature. The terms academic performance, transition, FRL, at-risk, and academic center, as they are used in this study, are defined below.
**Academic Performance**

For the purposes of this study academic performance will be measured by GPA. The GPA each individual student earned at the end of his or her freshman year and the GPA each individual student earned at the end of his or her senior year or at the time of exit from high school will be used. Exiting prior to graduation could be attributable to any number of reasons; examples might include dropping out, moving to a different school district, or moving out of state.

**Transition**

Transition refers to the movement of the student from a middle or junior high school to the high school. Many schools in the nation transition at the 9th grade level, however in this study the transition between junior high school and high school occurs during the 10th grade.

**FRL**

According to the United States Department of Agriculture (USDA, 2011), the National School Lunch Program is a federally assisted lunch program available to public schools. This program provides free and reduced lunches to qualifying students in both public and nonprofit private schools. Eligibility requirements are:

Those with incomes between 130 percent and 185 percent of the poverty level are eligible for reduced-price meals, for which students can be charged no more than 40 cents. (For the period July 1, 2010, through June 30, 2011, 130 percent of the poverty level is $28,665 for a family of four; 185 percent is $40,793). (United States Department of Agriculture [USDA], 2011).

Free and reduced lunch participation will be used as a proxy for family SES.
At-Risk

For the purpose of this study the term at-risk is based on district procedures. As stated previously, the district uses no specific criteria to identify students for consideration, nor does it have a specific definition of at-risk students that it uses. Individuals participating in the identification process usually recognize students that exhibit any number of characteristics linked to at-risk identification. These characteristics include: low socioeconomic status (SES), low grade point average (GPA), low attendance, high number of disciplinary referrals, mental health issues, behavior issues, family concerns, drug use, social maladjustment, or juvenile record.

Academic Center

As described earlier in this chapter the Academic Center is a 2-hour, in-school, academic intervention program for 10th grade students who have been identified at-risk of school failure in the 9th grade. Enrolled students work on core content class work and develop skills necessary to continue their education. Students are identified for program consideration based on 9th grade counselor, teacher, and administrative evaluation.

Summary

Many schools around the country have developed programs that could help our at-risk student population graduate from high school, but evaluation of the outcomes of these programs must be examined. This study will contribute to a growing body of literature as the focus of the study regarding prevention programming targeting transitioning at-risk high school students is an overlooked area. Though at-risk students, as a whole, are researched at many levels, very few studies have looked at at-risk students’ transitions to high school and none using a logic model evaluation approach. This study will also have practical contributions to institutions on the efficacy of a specific type of high school transition program for at-risk students and if their
participation increases academic achievement and helps those students persist towards graduation.
Chapter 2

LITERATURE REVIEW

Introduction

Every fall thousands of students around the United States undergo the same rite of passage: entering high school. Many students view this transition with excitement and anticipation. For these students high school is regarded as an opportunity to prepare them for the future. They welcome the opportunities to engage in new activities, make their own academic choices, and develop new friendships. Not all students, however, are as enthusiastic about entering high school. Another group of students view the transition to high school with apprehension. The school will be bigger, they won’t know anyone, and academic competition will be greater. Many of these students are already experiencing failure at the middle school level and considered at-risk of academic failure. For these students, negotiating the transition to high school becomes an overwhelming task instead of an exciting prospect.

Failure to make a successful transition into high school costs not only the student, but also the school. This cost is not just a repeated first year of high school but possibly “high dropout rates, low on-time graduation rates and low achievement in American high schools” (Herlihy, 2007, p. 1). Educational research has not sufficiently explained why some students with similar background characteristics persist towards graduation while others do not. Studies concerning drop out rates and the implications associated with dropping out span decades. However, the last decade has brought about increased external pressures from state and local governments to create programs or implement policy that will increase student achievement and aid in persistence towards graduation.
In today’s economic climate obtaining a high school diploma is more important than ever; however, since 1985 there has not been a significant increase in the U.S. high school completion rate (Kaufman, Alt, & Chapman, 2001). Research has shown there is a link between an unsuccessful transition to high school and persistence toward graduation (Allensworth & Easton, 2005; Jerald, 2006; Letgers & Kerr, 2001). Further study of the effectiveness of programs that focus on the link between an unsuccessful high school transition, especially for students considered at-risk, and persistence towards graduation is needed if we are to develop effective programs and policy to combat the drop out rate.

This chapter will begin with an overview of the theoretical framework used for this study followed by a discussion of how this framework informs the study. Current literature examining the term at-risk and prevention programming will be highlighted. Issues students” face during a transition will also be discussed. The chapter will conclude with a discussion of the significance of the study in light of existing literature and a chapter summary.

Methodological and Theoretical Frameworks

This section will provide an overview of the methodology and theoretical framework used to inform this particular study. The methodology, the logic model of evaluation, is a way for programs and organizations to identify their theoretical assumptions and, more importantly, to evaluate whether their practices match those assumptions. Therefore, in this section I will discuss the logic model and the theoretical assumptions that guide programs such as the Academic Center: theories of risk, prevention, and transition. All of these fit within a functional model of the school organization, in which risks to members (and thus risks to the organization) can be averted by responding early to reduce those risks. This reduces future costs to both the individual and the organization, and preserves the organization”s social legitimacy.
Methodology

This study uses a logic model for its methodological framework. The logic model provides in-depth understanding of a program so that the evaluation is both comprehensive and meaningful. The W.K. Kellogg’s Logic Model Development Guide (Kellogg Foundation, 2004) is a highly cited logic modeling guide. They define a logic model as a “picture of how your organization does its work—the theory and assumptions underlying a program. A program logic model links outcomes (both short- and long-term) with program activities/processes and the theoretical assumptions/principals of the program” (2004, p. III). Reneger and Titcomb (2002) and McLaughlin and Jordan (1999) have a similar definition of a logic model. They define a logic model as a graphic display of a program’s resources, activities, and intended results that identify program theory and function. Kaplan and Garrett (2005) provide a more scientific definition. They state that a logic model allows you to apply scientific method (hypothesis testing) to a project evaluation. Lastly, Fretchling defines a logic model as a “tool that describes the theory of change underlying an intervention” (2007, p. 1). Regardless of the definition, a logic model provides stakeholders with a visual representation of a program that can point out areas of weakness and strength. This “road map” (Kellogg Foundation, 2004) can be used beneficially at many different levels of program implementation.

McLaughlin and Jordan (1999) and the Kellogg Foundation (2004) both argue that logic modeling is beneficial at many different stages. Logic modeling is useful for building program understanding, program design, implementation, and as an evaluation tool to identify and measure results. Fretchling posits that the use of a logic model after a project is completed and results obtained is beneficial as it “becomes a map that guides others who might want to replicate the project or adapt it to other situations” (2007, p. 17) thereby making a contribution to the field.
Logic modeling is an outgrowth of the “program theory” evaluation approach which is simply a different way of thinking about program evaluation. An important aspect of program theory that sets it apart from traditional methodological evaluation is that the term “theory” can be broadly interpreted. Fretchling (2007) states that program theory need not be strictly research based but can be based on practitioner experience. Program theory “describes the causal linkages that are assumed to occur from project start to goal attainment and clearly defines the theory of change underlying a program or policy” (Fretchling, p. 5). According to Greene and Caracelli (1997), program theory is a stronger program evaluation method as both qualitative and quantitative methods are used together in a single framework. Other program theory definitions include “a plausible and sensible model of how a program is supposed to work” (Bickman, 1987, p.5) and “an explanation of the causal links that tie program inputs to expected program outputs” (Weiss, 1998, p.5). Regardless of the definition one chooses to use, they key elements of program theory are defining the steps of an activity or intervention and identifying how those steps are linked from start to finish. Logic modeling follows this method with a standard set of linked key components.

The fundamental components of a logic model are inputs, activities, outputs and outcomes (Fretchling, 2007; Kellogg Foundation, 2004; McLaughlin & Jordan, 1999; Taylor-Powell, 2008; United Way of America, 1996). The United Way describes inputs as “resources dedicated to or consumed by the program” (p. 1). The Kellogg Foundation uses the term resources to describe inputs and identifies them as “the human, financial, organizational and community resources a program has available to direct toward doing the work” (p. 2). The next component of a logic model is activities. Frechtling and McLaughlin and Jordan have similar definitions of activities: the actions required by the program to bring about the outcomes. The
Kellogg Foundation furthers this definition by identifying that “activities are the processes, tools, events technology and actions… used to bring about the intended program changes or results” (p. 2). Activities usually have to be done in an ordered sequence in a certain time frame.

Usually one or more activities are then linked to an output, which is the third component of a logic model. “Outputs are the direct products of a program activities and usually are measured in terms of the volume of work accomplished” (United Way of America, 1996, p. 1). This idea of outputs as products is also found in McLaughlin and Jordan (1999) and the Kellogg Foundation (2004). Frechtling’s (2007) definition differs slightly and identifies outputs as results of an action that can include products along with services and events. Outputs confirm that a product has resulted. The final component of a logic model is outcomes.

Outcomes are seen as benefits or changes resulting from participation in program activities and they must be observable and measurable (Kellogg Foundation, 2004; McLaughlin & Jordan, 1999; United Way of America, 1996). Fretchling, again, differs slightly with her definition of outputs as “changes that occur showing movement toward achieving ultimate goals and objectives” (2007, p. 22). All outcomes have a time dimension. These dimensions can be identified as short-term, medium-term, and long-term outcomes. Though there are no definite rules, most authors identified short-term outcomes as attainable in 1-3 years, medium-term attainable in 3-5 years, and long-term attainable in five years or greater (Fretchling, 2007; Kellogg Foundation, 2004; United Way of America, 1996).

McLaughlin and Jordan (1999) identify outcomes in a slightly different manner with short-term outcomes being those changes caused by the program’s outputs, medium-term changes resulting from short-term outcomes, and long-term outcomes following from benefits obtained through medium-term outcomes. The Kellogg Foundation states that “the more
immediate the outcome, the more influence a program generally has on its achievement” (2004, p. 49). Conversely, “the longer term the outcome, the less direct influence a program has over its achievement and the more likely other, extraneous forces are to intervene” (Kellogg Foundation, 2004, p. 49). This idea of extraneous forces is not discussed by all authors. However, a number of authors do include context or external influences (Arnold, 2002; Fretchling, 2007; McLaughlin & Jordan, 1999; Taylor-Powell, 2008) or impacts (Kellogg Foundation, 2004) in addition to the basic logic model components of inputs, activities, outputs, and outcomes.

Certain authors include the term context to help situate and explain program factors which may affect the logic model. Both Taylor-Powell (2008) and Arnold (2002) use the term external influences instead of context. Context is considered the components of the environment in which the program exists in and which influence the success of the program (Arnold, 2002; Fretchling, 2007; McLaughlin & Jordan, 1999; Taylor-Powell, 2008). Fretchling furthers this definition and states that context “frequently addresses the social, cultural, and political aspects of the environment” (2007, p. 27). Though the Kellogg Foundation (2004) does not identify context as another component of the logic model they do further their model to include the term impact. The Kellogg Foundation identifies impacts as “the fundamental intended or unintended change occurring in organizations, communities or systems as a result of program activities within 7 to 10 years” (p. 2). Though this definition may seem to closely align with the definition of long-term outcomes, it does differ slightly with the addition of “unintended”. Rarely can all outcomes be forecasted so this definition includes those positive and/or negative long-term outcomes that emerge.

The Kellogg Foundation identifies three types of logic models that may be used for program evaluation. The first logic model, the theory approach model will “emphasize the theory
of change that has influenced the design and plan for the program” (2004, p. 9). This type of model provides a thick and rich detail of why a program is needed, i.e., the assumptions. Research theory supporting a proposed solution can then be linked to assumptions (Kellogg Foundation, 2004). This then provides both detail of the problem or need and research support of how a program might work to address that specific problem or need. This model works best in programming planning and design stages.

A second type of logic model identified by the Kellogg Foundation is the outcomes approach model. This model “displays the interrelationships between specific program activities and their outcomes” (2004, p. 11). While the theory approach model is more of a “big picture” model, the outcomes approach model attempts to connect logic model components into a working program. This program “outline” is best for program evaluation and reporting. According to the Kellogg Foundation this type of model focuses on the causal linkages between program components to identify the relationship between the program activities and outcomes.

The final logic model identified by the Kellogg Foundation (2004) is the activities approach. This model is similar to the outcome approach by identifying relationships between components but does so in much greater detail. This type of model “maps the process of implementation…and describes what a program intends to do” (p. 10). When developing a logic model for program evaluation, the logic model does not have to be strictly one or the other, but can have elements of all three approaches. This study will utilize the second type, the outcomes approach logic model.

The steps used to develop the logic model, as discussed by McLaughlin and Jordan (1999), provide the basic evaluation framework needed to guide and inform the study. The logic model provides the foundation for program evaluation and helps us examine in summative form
how well the program works. We first need to identify the problem we are attempting to solve. For this evaluation study the problem would be academic achievement and low graduation rates for identified at-risk students. Problem identification includes a discussion of the need for a program to address this problem along with identification of factors that “cause” the problem. Previous sections identified dropout problems and its costs for individuals, schools, and society and students in the program in this study are identified as being “at-risk” of dropping out. Further discussion of the term at-risk will be presented later in this chapter.

Kaplan and Garrett (2005) posit that stating and assessing assumptions through literature reviews and discussion is crucial, but rarely done appropriately. Therefore care must be taken that the connections between the program and best practice literature and research that support the program approach are well discussed. The Kellogg Foundation (2004) identifies this as the theory of change, while Reneger and Titcomb (2002) use the term underlying rationale. Using best practice literature and research provides the reasons why we believe the program will work and why it will work in our particular setting or context. Later sections of this chapter outline the transition issues at-risk students face along with a discussion of the various types of prevention and transition programming.

The drawing of the visual representation of the model will be completed next. This will define the elements - inputs, activities, and outcomes - so that we can understand the logical flow of the model from program resources to long term solutions. The logic model depicts a graphic representation of the relationship between the theory of change and the desired results. This graphic representation will be included in Chapter Three.

The final step will be to verify the logic model. In order to verify the model we will need to make sure that all elements are included in the model and that the level of detail for each
element is sufficient enough that we can logically follow and understand the interrelationships. The logic model graphic developed for the Academic Center is presented in end of Chapter Three. It details the elements of the logic model and provides flowchart symbols so that the interrelationships can be followed. After analysis, a summary should be included that attempts to identify outside factors that could influence the change hoped for. These factors could be positive or negative. Logic model evaluative findings and identification and discussion of external factors will be presented in Chapter Five.

It is recommended that the logic model be developed with as many stakeholders as possible. Though this logic model was designed “after the fact,” data gathered for this study included documentation, artifacts, and personal communications that provided extensive detail on the problem definition, theory research, program design, and implementation. Knowing the assumptions allowed for a stronger study that helped focus the data collection and aided in the analysis and discussion of findings. Together, this knowledge provided a strong framework for the study and supported the reasoning for a post hoc study. Other limitations of using a logic model as identified by Fretchling (2007) are that if the evaluation brings to light too many questions about the program those most directly participating might become defensive and distrust the evaluation. Also, if the evaluation recommends that changes be made, again, those most directly participating might doubt the validity of the evaluation and disregard the recommendations. Kaplan and Garrett (2002) also warn that in-depth examination of a program can be risky as resentment might evolve if group beliefs are questioned or they are asked to provide documentation of work. As the logic model was created based on stakeholder artifacts, interviews, program design, and theory research, hopefully, those limitations will not occur.
Arnold states why evaluating a program with a logic model is crucial. “By articulating what the intended learning is and measuring whether the learning actually takes place, educators are participating in what Patton (1997) calls „reality testing”, knowing whether our programs actually accomplish in reality what we think they do in theory” (2002, p. 4). Having a comprehensive view of many aspects of an issue or problem is crucial in achieving a quality evaluation and finding out if, as stated by Patton, our program is doing what we hoped it would do. What the Academic Center hoped to do was to prevent at-risk 10th graders from dropping out. The next sections will explain the theoretical roots of at-risk, prevention programming, and transition issues students face in multi-level school systems.

Theoretical Framework: At-Risk, Prevention, and School Transitions

The term at-risk is borrowed from epidemiologists “who calculate associations between the incidence of condition and the characteristics of those afflicted by it” (Placier, 1996, p. 253). This type of definition allowed for the development of at-risk populations, based on statistical rates of affliction, which could then have access to treatments and health services (Placier, 1996). One of the first major reports to present and define the term at-risk, as applied to students, was the 1983 National Commission on Excellence in Education report entitled A Nation At-Risk. This report identified groupings of students who were to be considered most at-risk.

The Federal Government, in cooperation with States and localities, should help meet the needs of key groups of students such as the gifted and talented, the socioeconomically disadvantaged, minority and language minority students, and the handicapped. In combination these groups include both national resources and the Nation’s youth who are most at-risk” (National Commission on Excellence in Education, 1983, p. 32).
As the term at-risk was borrowed from the medical field it was seen as having medical associations and therefore, “came with its own method for identifying the target population, the epidemiological model” (Placier, 1996, p. 259). Data could be collected on individual students and then disaggregated into certain categories in which statistical levels of “at-riskness” could be identified. Then students could then be placed in any number of individualized programs targeting their specific at-risk category. Since then usage of the term at-risk has become almost commonplace in the educational workplace and research community. It is almost imperative that educational researchers and professionals utilize the term at-risk in order to establish legitimacy in the field, procure grants or funding specifically allocated for at-risk students, or communicate with district or state educational agencies (Placier, 1996). This commonality, however, does not provide for clear cut understanding of the term, “not all speakers will define it in the same way, because they have different purposes for using it” (Placier, 1996, p. 241).

At-risk. Catterall states that because the term is so multipurpose “at-risk” consequently lacks clear meaning and fosters conflicting implications for practice and policy” (1998, p. 302). O'Brien, Dillon, Wellinski, Springs, and Stith posit that the term at-risk is “ambiguous because of the evolution of its meaning and the different loci of blame” (1997, p. 12). Fundamentally, a student is at risk for dropping out if s/he demonstrates characteristics that are statistically associated with dropping out. However, educators use “at-risk” as a much more general descriptor, to mean “students who are in danger.” Frymier and Gansneder in the “Phi Delta Kappa Study of Students At-risk” identify that there are levels to being at-risk.

“At-Riskness” is a function of what bad things happen to a child, how severe they are, how often they happen, and what else happens in the child’s immediate environment. For example, a pregnant 14-year-old is at-risk. But a pregnant 14-year-old who uses drugs is
even more at-risk. And a pregnant 14-year-old who uses drugs, has been retained a grade, has missed 30 days of school, and has a low sense of self-esteem is still more seriously at risk. (1989, p. 142).

Other authors have also discussed levels or categories of defining at-risk students. Field, Wilhelm, Nickell, Culligan, and Sparks (2001), Moore (2006), Suh and Suh (2007), and Tyler and Lofstrom (2009) identify that students can be individually at-risk, meaning that the child could have any number of the following issues: disability, low self-esteem, abuse, and/or trauma are a few of the identified individual at-risk areas. Another category Moore, Suh and Suh, and Tyler and Lofstrom identify is environmental risk. In this category, a student’s family presents a risk, and this can include, but is not limited to, living in poverty, single parent home, low parent education and/or low SES. A final category identified by Moore, O’Brien et al. (1997) and Tyler and Lofstrom is community. In this category, the student’s community environment, which can include the neighborhood or school, presents the risk. Again this can include, but is not limited to, living in an area with a high crime rate, a school with low graduation rates, a community with high rates of teen pregnancy or high rates of poverty. With the myriad of definitions, categories, and levels it is not surprising that Frymier and Gandsneder (1989) in their collaborative study of 22,018 fourth, seventh, and sophomores found between 25% and 35% of the students in the study were seriously at-risk, demonstrating at least six or more of 45 factors previously linked with being at-risk. The literature shows that this lack of definition of the term at-risk can lead to many problems with identification and prevention solutions.

One such problem identified in the literature is “risk by association” (Catterall, 1998, p. 303) or blaming the victim. Wotherspoon and Schissel state that “the broadening of definitions
of “at-risk” populations to incorporate increasing numbers of individuals and circumstances has mixed implications, reflecting both genuine concern for learners in troubled situation and potential for intervention with little critical assessment of the nature and need for such action” (2000, p. 3). Essentially being a member of any number of disadvantaged groups (poor, minority, low parental education) found within our society can, and sometimes does, predispose them to being considered at-risk (Catterall, 1998, Fairbrother, 2008; Field et al., 2001, O’Brien et al., 1997, Seely, 2004; Wotherspoon & Schissel, 2000). This risk by association is reinforced by educational research when “achievement and attainment levels are displayed by income level, race, ethnic origin, or language skills, the effect can be to label whole groups of students at-risk rather than identify for attention those who are experiencing actual difficulties” (Catterall, 1998, p. 304). This type of group labeling could lead to the identification of individual students as at-risk when, in fact, they are not at-risk at all, just a member of a disadvantaged group.

Catterall’s (1998) research, drawn from the National Education Longitudinal Study of 1988, (NELS: 88), examined performance based risks. Using logistic regression, Catterall found that after controlling for SES, there were no significant differences in dropout probabilities between African American or Asian students and whites. Hispanic students were, however, found to have a high dropout rate in his model. This finding agrees in part with Rumberger’s (1987) review of dropout studies where he posits that when controlling for SES, ethnicity is not a valid predictor. O’Brien et al. suggests that instead of defining at-risk as a problem within the student and then labeling that student and providing specialized programming, we should instead, “locate the problems of at-risk students in the school culture” (1997, p. 3).

Wotherspoon and Schissel suggest that schools themselves are “risk-inducing” (2000, p. 8) as they fail to accept minority culture and context and seek to instill majority, standardized
values and skills. “The impact of hunger, racism, violence, serious illness or disability, inability to speak English or French as a first language, and other circumstances become problems only when students are placed in environments that are built around expectations and practices dependent on specified conceptions of normality” (Wotherspoon & Schissel, p. 7). Instead of casting the net to include an even greater number of students who have been deemed at-risk, perhaps the educational community should become more responsive to the community culture and context in which it is located. Special programming for “at-risk” behavior allows schools to focus on fixing the symptom rather than the social cause. Schools are, therefore, held relatively blameless and left alone. Failing to identify with the community culture and climate is not the only way schools can contribute to the growing problem of at-risk identification and prevention.

Princiotta and Reyna (2009) put forward the idea that student academic failure, behavior problems, and general lack of interest in schooling is a symptom, not of their being at-risk, but of the school itself being at-risk. According to a study done by the EPE Research Center in 2008 more than one-third of all schools did not meet AYP for that year. If a school is not able to meet the standards required of them by law, how then, can we blame students in attendance at those schools?

The logic of prevention. Regardless of this critical perspective, many prevention programs, and in a larger context, programming to help at-risk students succeed are implemented based on commonly used at-risk student indicators. However, if these indicators are not proven to be valid then it calls into question the foundations of almost all support programming developed for at-risk students. A final area of concern that stems from the literature calls into question the use of commonly used indicators to identify at-risk students for program placement.
Gleason and Dynarski (2002) used interview and other data to determine if risk factors commonly used by dropout prevention programs were strong predictors of which students would actually dropout. Their findings proved very intriguing. Gleason and Dynarski note that though there are many studies that correlate student characteristics and performance with dropping out, predictive validity has not been assessed thoroughly. Their main results indicate that: identified risk factors are not good indicators of who will and will not drop out; dropout prevention programs are serving students who probably would not have dropped out; and finally dropout prevention programs are not identifying and serving those students who eventually will drop out. This poses an interesting question. Could students self-select to be in a dropout prevention program rather than being selected by a calculation of risk factors? Further study of programs where students self-select to participate in dropout prevention programming is needed to determine this. Perhaps even more importantly this study indicates that determining who will and will not dropout is difficult. Therefore, even the best program, if it identifies and serves the wrong student, is ineffectual and therefore will not significantly reduce the school dropout rate.

School Transitions. Very few adults, and even fewer students probably contemplate how historical precedent shapes modern educational reform in the American educational system. However, historical changes affecting the way schools evolved, current educational reform efforts, and changes in environment, educational practices, and social structures are all issues which affect student transition to high school. Students really have no say in how and when they transition to high school; however, they still must learn to adapt to the many changes they are faced with. These changes often leave students, especially those at-risk, feeling bewildered.

Historical and current school reform issues are factors affecting transitional achievement loss for at-risk students and the dropout rate. In 1938 the Fair Labor Standards Act was passed
that, for the first time in U.S. history, addressed child labor by regulating minimum ages of employment and hours worked. Renchler (2002) posits that because of these social changes adolescents needed to be better prepared for high school since they could not immediately become part of the workforce. It was during this time that many schools were altered to include elementary, middle, and high school grade configurations. According to Smith (1997), the primary goal of separate schools for early adolescents was to encourage students to stay in school by preparing them for the rigors of high school while maintaining the structure and social closeness of elementary school. Today we still find that the most common educational reform efforts alter the middle school configuration. In turn, the decision to alter the grade span dictates how many transitions a student will experience during their education and when a student transitions to high school.

One issue concerning student achievement loss associated with school transitions is grade span configuration. In an ex post facto study Alspaugh (1998a) studied three groups of sixteen schools. Group one was comprised of schools with K-8 and 9-12 groupings. Group two schools had one elementary, one middle, and one high school. Group three had two or three elementary schools, one middle school, and one high school. Alspaugh found that all three groups experienced a mean achievement loss in the transition to high school at 9th grade and students who attended a middle school experienced a statistically significant achievement loss when transitioning to high school. High school dropout rates were also higher for districts with 6-8 middle schools than for districts with K-8 elementary spans. Alspaugh posits that this might be associated with the double transitions and achievement loss that accompanies those transitions. However, this study utilized a limited number of small, rural school districts from a single state and no urban schools were included in the study. A second limitation stems from the lack of SES
consistency between each school grouping. Renchler (2002) and Alspaugh (1998b) agree that dropout rates are highest for students who transition in the 10th grade. Isakson and Jarvis (1999) also recognized decreased GPA during the transition to high school in a short term longitudinal study that measured student academic adjustment during the 8th and 9th grades. Regardless of when a student transitions to high school, each will face changes in educational practices, social structures, and environment - changes which at-risk students are ill-equipped to handle.

Adaptive structures found in high schools often lead to educational practices that are very different from educational practices found in middle or junior high school. A number of authors recognize that these differences in educational practice are of concern to students. Student concerns most frequently described in the literature were that teacher expectations and competition to obtain higher grades would increase (Akos & Galassi, 2004; Isakson & Jarvis, 1999; Kemple, Connell, Klem, Legters, & Eccles, 2005; Mizelle, 2005; Rice, 1997). Other educational practices that demonstrate student concern were perceived decreases in teacher/student interaction and nurturing accompanied by increased homework loads (Akos & Galassi, 2004; & Jarvis, 1999; Kemple et al., 2005; Mizelle, 2005; Rice, 1997). Fewer social support opportunities coupled with increased competition can be particularly troubling for at-risk youth. Academics were not the only concerns expressed by students; issues surrounding the new school environment also surfaced.

Attending a new school is an intimidating process for almost all students because of environmental concerns. Students worry about getting lost, walking into the wrong classroom, forgetting their locker combination, or not having any of their friends in class or at lunch with them. Some students also move from a relatively small middle school or junior high to a larger and seemingly more impersonal high school. Both Akos and Galassi (2004) and Rice (1997)
found that school safety and school size are important environmental concerns that students have during the transition process. Statistically, high schools are considered less safe than junior high or middle schools. Bekuis (1995) conducted a longitudinal study that evaluated student exposure to school violence as a potential risk factor for dropping out. Students were assessed in 8th grade and again in 10th grade. Bekuis found that the odds of dropping out were three times greater for students who felt safe in 8th grade and unsafe in the 10th grade than students who felt safe at both times. This can have a negative impact on student performance if they feel unsafe in the school environment and suggests that students exposed to an unsafe school environment are at an increased risk of dropping out. Environmental concerns are probably the most important issue for student in those first days of transition. After a short period of time, however, combinations are memorized, the quickest route to class is mapped out, and the school does not seem nearly as large as it did on that first day. Social structures are not as easily surmounted for transitioning students.

Social structures are of particular concern to students. Fitting in, making connections, and increased autonomy are all a part of the high school experience, but can be intimidating to new students. Students who come from smaller more homogeneous feeder schools and then transition into a school with a larger multicultural base often find the change distressing (Akos & Galassi, 2004; Isakson & Jarvis, 1999). Rice (1997) found that students were concerned that high schools would loose the “neighborhood feel” and therefore be more unfamiliar and isolated. Lastly, students transitioning into high school find the new level of autonomy difficult to manage (Isakson & Jarvis, 1999; Mizelle, 2005). Students must now manage demands of friends, homework, jobs, studying, and extra-curricular activities. Many students are able to date, participate in school dances and go to movies, where before their schedules were controlled
greatly by their parents. Several other important changes concerning family and friends can also affect how a student deals with their transition to high school.

Smith (1997) states that student decreases in GPA following the transition are often associated with family, school, or friend stressors. A study on parental support completed by Isakson and Jarvis (1999) found that parental support typically declines between junior high and high school. This same study found that students who perceive parental support during the transition fare better than those who do not perceive parental support. More empirical research needs to be completed in the area of parental support as other studies have found contradictory effects. According to a study by Rice (1997) the willingness of parents to help with homework or discuss educational issues had no statistical effect on transition outcomes. However, student reported time with their parents engaged in non-school activities had a positive statistical effect on transitional outcomes.

As prior research and literature has shown, there are many issues surrounding the transition to high school; a majority of these are external to the student. However, the student is also central to the transition. Adolescent development plays a significant role in how successfully any student manages the educational, social, and environmental changes that often coincide with the transition to high school.

Adolescence in humans is “that awkward period between sexual maturation and the attainment of adult roles and responsibilities” (Dahl, 2004, p. 9). Transformation from childhood to adulthood cannot be defined explicitly by physical changes alone but needs to be viewed through several aspects of cognitive development: intellectual, social-emotional, and moral interactions.
Physically, pubescent adolescents will go through dramatic changes in body size and composition along with the physical changes of sexual maturation. Many of these changes occur between 9 to 12 years of age (Dahl, 2004; Hamburg & Takanishi, 1989). Pubertal maturation is also associated “with a greater inclination to seek experiences that create high intensity feelings…adolescence is a time when sex, drugs, very loud music, and other high-stimulation experiences take on great appeal” (Dahl, p. 7). Some adolescents can manage these “high intensity feelings” while others have difficulty and make impulsive and/or reckless decisions. Adolescent intellectual, social-emotional, and even moral development make these decisions much more difficult.

Intellectually, much like physically, adolescents will have differing growth rates. Some mature physically and cognitively earlier, some later. When looking at students considered at-risk Vygotsky’s (1978) theory of social cognition is relevant. Social cognition theorizes that culture has a dramatic impact on cognitive development and that cognitive processes such as reasoning, language, or thought are developed through social interactions (Vygotsky, 1978). These interactions are defined by Vygotsky as the Zone of Proximal Development. A child learns when an adult or other knowledgeable person provides the guidance and encouragement to help the child overcome an obstacle or problem. This type of assistance has also been termed scaffolding. Scaffolding is “the right balance of monitoring and interest from parents, teachers, coaches and other responsible adults-in which to develop the skills of self-control while still being afforded sufficient support and protection” (Dahl, p. 20).

In contemporary society, “social supports have eroded considerably through extensive geographical mobility, scattering of extended families, and the rise of single-parent families, especially those involving very young, very poor, and socially isolated mothers” (Hamburg and
Social erosion of the family unit could have an effect on the Zone of Proximal Development or scaffolding. For example, if the adolescent has a single parent who works during the evening while the child is at home, they have a limited opportunity to develop the skills to overcome problems. Further research could be done to see if the characteristics that identify students as at-risk for school failure such as low SES or single parent family could possibly hamper adult/child social interactions thereby decreasing intellectual growth rates of students considered at-risk. Another aspect of adolescent cognitive growth that should be discussed is social-emotional development.

According to Thornburg (1986), the pressure to participate in social activities is greater for adolescents than any other age group. These activities aid in adolescent social-emotional development. Erickson’s ego identity, as explained by Thornburg, is how adolescents view themselves and how they perceive the way others view them; however, this is dependent on the ability for the adolescent to integrate past experience with present expectations and roles. Thomas (2000) also discusses Erikson’s ego identity, providing further analysis that states adolescents not only develop self-definition, but also a new understanding of their purpose and how their purpose helps them define how they manage daily life. As students try to integrate what they know about themselves, past experiences with new roles, adolescent behavioral urges, and social experiences, discontinuity can occur. Erickson describes this discontinuity as identity diffusion.

Erickson’s identity diffusion, as described by Thomas (2000), occurs when an adolescent does not yet know who they are or where they fit. If an adolescent participates in an activity and parents or society ignores that participation or does not reinforce that participation, then the adolescent will turn to peers for the acceptance (Thornburg, 1986). Adolescents dealing with
identity diffusion, who find acceptance with a certain group, might begin to over identify with that group. They will act in a manner that identifies group affiliation, perhaps dress in a certain way or take on certain mannerisms, even exhibiting behaviors or speech that show little tolerance for others outside of their identified group. Group affiliation could be positive or negative. Positively, a student could identify with the “jocks” of the school; negatively, an adolescent could identify with a local gang. An adolescent’s self-perception and group affiliation decisions can influence his or her moral development. The final aspect of adolescent growth that will be discussed is moral development.

Adolescents entering high school could be moving into Kohlberg’s conventional level of moral development (Thomas, 2000). At this level “a person conforms to the expectations of her family, group or nation. She actively supports and justifies the existing social order” (Thomas, p. 479). Adolescents might behave in ways that others would approve of and that by doing the right thing they are showing respect for authority and maintaining the existing social order (Thomas, 2000; Crain, 1985). Again this level of moral development could have positive or negative effects.

The negative effects are critical for all adolescents, but especially for students already considered at-risk of school failure. Skipping school because it is what other group members are doing or participating in illegal activities because higher level members of the social order would approve is not positive moral development. Students who are considered at-risk may not have the intellectual or social-emotional level of growth needed to make positive moral judgments which in turn could have negative impacts on their future.

Adolescents have mature bodies and “brain systems that are activated for sexual and romantic interest and passions, but a relatively immature set of neurobehavioral systems for self-
control and affect regulation” (Dahl, 2004, p. 18). Decisions adolescents make today using immature intellectual, social-emotional, or moral levels of development can have far reaching effects into adulthood, even though the thought of adulthood might seem very far off to the average teenager. However, in the past, the adolescent-adult timeline was vastly different.

Historically, Dahl (2004) states, that in more agrarian societies and during the early years of the industrial revolution, the interval between puberty and adult roles was around 2-4 years. In modern society that interval has stretched out to 8-15 years or more. This extension allows adolescents the opportunity to learn skills needed to take on adult responsibilities, opportunities for increased educational levels, exploration of sports and the fine arts, and the prospects to explore different types of friends and levels of relationships without the commitment of marriage (Dahl). However, habits developed in adolescence can have major lifetime effects especially if the adolescent fails to develop the skills and knowledge needed for post-secondary careers or educational opportunities. “Long term effects entail a narrowing of life options, as with the school-age mother who drops out of school and diminishes her life-time employment prospects” (Hamburg and Takanishi, p. 826).

Even though adolescents may look like young adults the physical and cognitive trajectories are not parallel:

Being a responsible adult requires developing self-control over behavior and emotions to appropriately inhibit and modify behaviors-despite strong feelings-to avoid terrible consequences. It requires that individuals be capable of initiating and carrying out a specific sequence of steps toward a long term goal even though it may be difficult (or boring) to persist in those efforts (Dahl, 2004, p. 18).
Acts, such as dropping out of school, that may seem completely irrational to an adult may seem completely valid to the adolescent based on their level of cognitive growth. Professionals who work with adolescents, especially adolescents considered at-risk of school failure, should have a comprehensive knowledge of all aspects of adolescent development and cognitive growth in order to develop programs that will be the most effective. The number of programs to help students deal with these transition issues will be discussed in the next section.

*Previous Prevention Program Studies*

This section provides an overview of a variety of prevention programs based on the needs of students who are seen as at-risk for school failure. The effectiveness of these programs, based on the literature and prior research, will also be highlighted.

As stated in Chapter One, schools are under immense pressure to raise graduation rates due to national, state, and local initiatives. Making sure that at-risk students stay engaged in school and on-track for graduation is a priority. All over the country schools, universities, and not-for-profit groups are implementing and evaluating any number of reform efforts in order to achieve higher high school graduation rates. However, any reform effort must be grounded in evidence and have a proven effect. The cost of implementing an unsuccessful program is too great for both the school district and most importantly, the student.

This section gives an overview of different types of prevention programs identified in the literature and their effectiveness. The number and types of prevention programming vary greatly. However, prevention programs can be categorized. These categories include academic programs, family involvement programs, and structural programs.

Academic prevention programs are focused on providing students with academic support during the transition to high school. This support includes the use of tutors, (Akos & Galassi,
Specialized academic courses geared towards helping students meet the academic requirement of core subjects were also utilized. Talent Development’s Ninth-Grade Academic Center as described in Herlihy’s (2007) overview allowed students with inadequate backgrounds in math and reading to take Transition to Advanced Mathematics and Strategic Reading. This allowed students to still enroll in an algebra class during the ninth grade year instead of taking a lower level preparatory math course. Allensworth and Easton (2005) found that students who took algebra during their freshman year of high school were more likely to graduate on time than students who enrolled in a lower level math course during their freshman year.

Some prevention programs advocate the involvement of family, as the transition to high school affects both the student and the family. This type of program looks to increase direct contact between teachers and/or the incoming school and the parent (Akos & Galassi, 2004; Chapman & Sawyer, 2001; Mizelle, 2005; Smith, 1997). For example, the Transition to High School Initiative as described by Chapman and Sawyer (2001) utilized a parents’ night where parents, middle and high school teachers, and middle and high school administrators engaged in small group discussion about the transition to high school for students considered at-risk.

It is interesting to note that Smith (1997) found schools with prevention programs that focused on dropout prevention and increased academic achievement had higher overall socioeconomic status (SES) and parent involvement than schools without prevention programs. This may be because in higher-achieving schools, at-risk students are in the minority and therefore can be identified for intervention. The programs that Smith evaluated were considered partial or full programs; specific category, however, was not discussed. Partial programs targeted
parents and students and full programs targeted parents, students, and staff. When Smith assumed no differences between students or schools, partial and full programs appeared effective. However, when covarying background differences, the effectiveness of partial programs was negated and the efficacy of full programs was reduced. It would seem from the literature that programs that focus on the student, family, and staff could prove most beneficial. However, since most of this research has been conducted at schools with higher SES and more parent involvement it would be difficult to generalize these findings to all schools, especially those with extremely low SES and low parent involvement.

The final prevention programming discussed in the literature really cannot be considered a “program” but more structural reform. Programs that fit in this category implemented interventions that altered both the structure of the school and the role of the teacher. Dynarski and Gleason (1999) synthesized data from 85 schools that received funding from the U.S. Department of Education’s School Dropout Demonstration. The authors used comparison group methodology to evaluate five programs that could be considered structural reforms. Their findings indicated school restructuring and reform efforts focused on changing classroom experiences for at-risk students led to improved grades for students and increased teacher school satisfaction. In order to deepen the discussion of structural reform prevention programming, four programs that fit this category and specifically address the transition to high school for at-risk students are discussed. These programs are Talent Development’s Ninth-Grade Success Academy, Project Transition, Springview High School Student Success Program, and Mountain Alternative High School.

An executive summary co-authored by Quint, Miller, Pastor and Cytron (1999) of Manpower Demonstration Research Corporation (MDRC) provides an overview of Project
Transition and its outcome. Project Transition was designed by MDRC and implemented in Kansas City, Kansas, and Milwaukee, Wisconsin. The core element of the program was the school within a school framework. This allowed for student/teacher teaming where a group of four core teachers all had the same 120 students. These teachers were given extra planning time for daily team meetings that focused on professional development and student problem solving. The team also had a coach to help aid in improving instructional practice and to support professional development. An analysis of the program found that Project Transition had no impact on at-risk student attendance or grade point average. Positive effects were found on at-risk student autonomy and levels of engagement in school.

The generalizability of this particular program is difficult to gauge. The program was only implemented in two schools over a decade ago. No mention was made of how long each school kept particular structural interventions or if plans were being made to test the program in another school. It is evident that the program helped students feel more a part of their school during the transition, but its lack of effect on grade point average and attendance calls into question its effectiveness on aiding student persistence towards graduation.

Talent Development’s Ninth-Grade Success Academy was developed in 1994 through a partnership between the Center for Research on the Education of Students Placed At-risk (CRESPAR), The Johns Hopkins University, Patterson High School in Baltimore, Maryland, and Howard University in Washington, DC. Corinne Herlihy (2007) of the MDRC provides an evaluation of the implementation of the Talent Development program.

Key features of the Talent Development program were separate settings for incoming freshman, small team teaching structures, incentives for students who attend school regularly and maintain pre-determined academic goals, extended block scheduling to help students overcome
deficiencies, the “Twilight Academy” for students who failed ninth grade or found the traditional academic setting difficult, and lastly coaching and professional development focused on curriculum and instruction. Analysis of outcomes showed that Talent Development had a positive effect on attendance, credits earned, and persistence towards graduation. Talent Development seems to provide a program that has positive outcomes for at-risk students. However, few schools have the manpower and resources to undertake the structural reform efforts needed to make such advances. Though positive, it is doubtful that this model could be implemented broadly in secondary schools around the nation.

The final two programs, Springview High School Student Success Program and Mountain Alternative High School were overviewed in a qualitative study by Fairbrother (2008). Admittance to both programs required referral from administration, counselor or teacher, though the Mountain Alternative High School also accepted self-nominations. Targeted students were identified as having poor attendance, academic issues, family problems, and/or low credits. Both programs offer smaller classes with low teacher-student ratio’s focusing on core subjects and establishing personal connections with the students. Fairbrother (2008) found several themes that emerged from the research findings.

Fairbrother (2008) noted that the level of commitment evidenced by teachers and administration to the success of these programs was high. Those participating “demonstrated professional care about these students and really wanted to help them be successful” (p. 593). A second theme to emerge found that student satisfaction with these programs was also high. Students felt supported and wanted to remain with the program as they felt the personalization and academic benefits were great. A final theme emerging from the study focused on academic expectations. Fairbrother found that little was expected of these students academically. Lack of
significant homework and easy accumulation of credit perpetuated the assumption that at-risk students do not have the ability to complete advanced levels of work. Fairbrother found this most disturbing stating that “It is unfortunate that these well meaning programs perpetuated that expectation” (p. 608).

It is evident that there is no magic bullet program that will aid in at-risk student persistence towards graduation. All of the programs evaluated did have a common element: some form of affective student development. Each program focused on personal interventions that would help a student feel supported and successful during the transition to high school. Lehr et al. (2004) reviewed 41 interventions and found that 71% included a personal/affective focus, 49% included an academic focus, and 73% included a mixture of interventions. Dynarski and Gleason (1999) used an experimental design to study sixteen prevention programs targeted towards at-risk students and found that choice of teacher was more important than curriculum decisions. These same findings concerning affective elements were again presented by Dynarski (2001). Making the connection to the student, it would seem, is the key to a successful transition program.

The program in this study can be characterized as an academic prevention program. Academic prevention programs focus on providing students with academic support during the transition through the use of tutors and discussions with students concerning academic policies and expectations. The Academic Center staff provides students with written academic expectations to reinforce academic policies and study skills sessions that target Academic Center and core class expectations. Personal interventions are also evident in this program through their counseling services and social-emotional support.
Limitations of the research

From a logic model evaluation approach it is interesting to note that very few studies explicitly state program goals. Explicitly stating program goals or outcomes is a crucial element of the logic model method. Of the programs reviewed, the importance of student support is implied, but only a handful of authors provide specific goals. Specifying goals would provide means for program evaluation. Perhaps keeping goals vague or non-existent allows for a very flexible approach to evaluation of whatever outcomes seem most legitimate or relevant to the stakeholder assessing or evaluating program effectiveness.

The most common transition program goals were providing students with information about the new school and involving parents in the transition process (Akos & Galassi, 2004; Chapman & Sawyer, 1999; Mizelle, 2005). Other goals included bringing both middle and high school faculties together to discuss transition requirements (Mac Iver, 1990) and career education (Chapman & Sawyer, 1999). Without an identifiable goal to work towards it would seem difficult to measure the success of a program. Perhaps more empirical research could be done in the area of transition programs with specific goals and those that have implied goals and the outcomes for both.

Another area of concern stems from participant sampling limitations. A number of studies analyzed for this literature review were done with relatively high performing homogeneous groups. Akos and Galassi (2004) used students from a medium sized southern college town where 90% of students attended post secondary school. Isakson and Jarvis”s (1999) sample was from a public university affiliated lab school where a majority of students were white and from middle class families. Smith (1997) also utilized a sample consisting of mostly white middle class students. Once again further empirical research needs to be completed with a
more heterogeneous sample to determine if any program can be considered successful. The unavailability of diverse samples is a serious limitation and probably the underlying reason for the next area of concern.

Another area of concern noted for this literature review was the lack of studies that specifically addressed high school transition programs for at-risk students implemented during the first year of high school. Many studies have been completed on the transition from elementary to middle school or middle school to junior high. A number of studies examined for this particular review focused on the transition from middle school or junior high school to high school (Isakson & Jarvis, 1999; Rice, 1997; Smith, 1997). However these studies were implemented during the final year of middle or junior high school. Chapman and Sawyer (1999) identified a specific transition program for at-risk students but it also was instituted in middle school. Limited numbers of articles were found that specifically discussed transition programs for at-risk students implemented in the first year of high school; studies by Fairbrother (2008), Herlihy (2007), and Quint, Miller, Pastor and Cytron (1999). This study will hopefully overcome many of these limitations by discussing and evaluating a transition program for at-risk students implemented in their first year at an economically and ethnically diverse high school.

The literature focusing on drop-out prevention is rather large in comparison to studies of what can be considered the antecedent to the drop-out problem: unsuccessful transitions to high school. This literature review has attempted to present an overview of some of the most current research concerning the use of the term at-risk and prevention research for at-risk students. Transition concerns for at-risk students were highlighted along with the various types of prevention programs being implemented currently. After reviewing the findings it can be assumed that an unsuccessful transition to high school could ultimately lead to a student’s
decision to drop out of high school. To what extent these to factors are interrelated and how they can be offset by a transition program is one that needs to be studied further. Therefore, this study addresses a gap in our knowledge and examines if an academic prevention program targeting at-risk transitioning 10th grade students increases academic achievement and graduation rates.

Summary

Students who experience an unsuccessful transition to high school are at increased risk of dropping out of school, a correlation which has been proven by a number of researchers. However, very little scholarly attention is directed towards the middle or junior high school to high school transition in comparison to the dropout problem which has been scrutinized for the past several decades. It would seem pertinent to increase the academic study of prevention programs for at-risk students, particularly high school transition programs, in order to determine if these programs help at-risk students perform better academically and persist towards graduation. This study provides evidence regarding the effectiveness of one public school”s transitional support program in this regard.
Chapter Three

METHODS

Introduction

This is a program evaluation study utilizing a logic model as the evaluation approach. Logic model outcomes were used as the markers to investigate mean differences in academic performance and graduation rates between at-risk students who participate in a high school transition program and at-risk students who did not participate. This chapter will outline the research methods that are be used in the study including: research questions, methodology, research design, data sources, population, data collection procedures, data analysis methods, limitations, and a brief summary.

Research Questions and Hypotheses

R1-What criteria are used to identify 9th graders for referral to the Academic Center?

R2- Are the graduation rate mean scores of at-risk students participating in the Academic Center during their transition to high school different from at-risk students who do not participate?

H_02-There is no significant difference between the graduation rate mean scores of at-risk students participating in the Academic Center during their transition to high school and at-risk students who do not participate.

R3-Are the exit GPA mean scores of at-risk students participating in the Academic Center during their transition to high school different from at-risk students who do not participate when students are matched according to pre-entry characteristics (ethnicity, gender, and FRL status)?
H₀3-There is no significant difference between the exit GPA mean scores of at-risk students participating in the Academic Center during their transition to high school and at-risk students who do not participate when matched according to pre-entry characteristics (ethnicity, gender, and FRL status).

R₄- Are the exit GPA mean scores of at-risk students participating in the Academic Center during their transition to high school different from at-risk students who do not participate when the pre-entry characteristic of freshman GPA is controlled?

H₀₄-There is no significant difference between the exit GPA mean scores of at-risk students participating in the Academic Center during their transition to high school and at-risk students who do not participate when the pre-entry characteristic of GPA is controlled.

Methodology

As discussed in Chapters One and Two, the study is guided by the logical model of program evaluation. Key aspects of this model are inputs, activities, outputs, and outcomes. These aspects can help programs and organizations evaluate whether practices match theoretical program assumptions. For purposes of this study, the researcher will next summarize the program theory and previous steps in the logic model. This then leads into the research design for the final steps in the model.

Academic Center Logic Model

Below are six questions and corresponding answers to help clarify the program theory surrounding the development of the logic model for this program evaluation. These were developed from documents and other information on the history of the program. This will be
followed by a flowchart that summarizes the steps of the logic model specifically developed for
Mid-Town High School’s Academic Center.

**What is the problem that should be addressed?**

Low academic achievement and graduation rates of students considered at-risk for school failure.

**Why address this issue?**

All students can have difficulties with the transition to high school, but difficulties are often
greater for students considered at risk of school failure. Secondly, at-risk students often need to
recover credits in order to stay on track for graduation. Lastly, students considered at-risk for
school failure often do not persist to graduation.

**What are the desired results?**

Increased academic achievement and improved graduation rates for identified at-risk students
who participate in the Academic Center.

**Why do you believe this plan will work?**

Several studies of prevention and transition programs have reported positive effects. Smith
(1997) found positive effects in schools with prevention programs that focused on dropout
prevention and increased academic achievement. Dynarski and Gleason (1999) indicated that
school reform efforts that change classroom experiences for at-risk students led to improved
grades. A study of Project Transition co-authored by Quint, Miller, Pastor, and Cytron (1999)
found positive effects on levels of engagement for at-risk students. Lastly, Herlihy’s (2007)
analysis of Talent Development outcomes showed positive effects on attendance, credits earned,
and persistence towards graduation.

**What influential factors could influence the outcomes?**
Student motivation in several areas could influence program outcomes: student commitment to the program, student work ethic, student motivation to graduate. Similarly, the program has little control over environmental factors in the student's life. Home life, family situations, a student’s personal life all could influence program outcomes.

Other factors that could influence program outcomes are program staff commitment to the program and students, commitment of core teachers to provide program staff with lesson plans or unit themes, and/or lack of support for program policy and staff by administration.

**Why would identified changes work?**

A great deal of research, planning, and preparation was made by a core group of administration and staff to develop a program to help at-risk students transition to high school. When such a program was promoted to the school staff, staff approved of program goals and objectives and indicated that they would support a program that focuses on helping at-risk students during their transition to high school. High levels of administration and staff buy in could help the program be more successful than if the staff or administration had little support for such a program.

Figure 1 on the following page summarizes the logic model in flowchart form.

**Research Design**

This study addresses the research questions for the Outcomes step in the model using a quasi-experimental design. Quasi-experimental designs are utilized when a researcher has little or no control over factors that could influence the outcome. Often treatment or control groups may not be randomized (Gribbons & Herman, 1997). As at-risk student assignments were made prior to the organization of this study, randomization was not possible.
Academic Center Logic Model

Inputs
- In order to accomplish activities the program needs to complete the following:
  - At-risk students identified by jr. high guidance, administration and teacher evaluation
  - Program materials distributed to prospective at-risk students
  - The high school provided 2 Academic Staff members and 1 guidance counselor and facilities

Activities
- In order to address the problem the program will conduct the following activities:
  - Interested students interview for program.
  - **Services:**
    - Guidance
    - Counseling
    - Career Planning
    - Study Skills Sessions
    - Academic Support for core classes
  - Provide services to enrolled at-risk students
  - **Collaboration**
    - Work with core teachers to obtain unit themes and assignments.
    - Work with students to identify academic and affective needs.

Outputs
- Once underway or completed the activities will produce the following evidence of service delivery:
  - Approximately 75% of interviewed students enroll in the program.
  - Provide services to enrolled at-risk students

Outcomes
- If activities are completed the following changes could be observed:
  - **Short-Term**
    - Increased academic success for at-risk program participants as compared to at-risk non-participants
    - Increased graduation rates for at-risk program participants as compared to at-risk non-participants
  - **Long Term**
    - Beyond the scope of this study to measure

**Service Delivery**
- 3 blocks per day
- 20 students per block
- 110 minutes per day
- 5 days a week
Setting

Data for this study come from one secondary school located in the Midwest. For this reason a comprehensive depiction of the school is provided. Mid-Town High School (MTHS) enrolls around 2,000-10th grade through 12th grade students which makes it the largest 10-12 high school in the state. The school operates on a 180-day academic year with two semesters and utilizes a traditional seven period day with each class being 50 minutes in length. Twenty four credits are required for graduation. There are 180 faculty members at MTHS, 40 of whom have earned a Bachelor’s degree while 126 have earned a Master’s degree. The remaining faculty members have a variety of degrees which include Specialists, Doctorates, and MBAs (Mid-Town High School Profile, 2009).

The student body consists of students from a variety of ethnic, socioeconomic, and religious groups. The current ethnic make-up of the school is as follows: African American 26%, Asian 4%, Caucasian 65%, Hispanic/Latino 4%, and Native American 1%. MTHS also enrolls a number of students from different countries (Mid-Town High School Profile, 2010).

There are a total of 17 different academic departments at MTHS offering traditional, honors, and Advanced Placement (AP) courses. Honors and AP courses are open to all students. AP courses are available in art, English, foreign language, math, music, science, and social studies. Table 2 shows the number of students who took an AP test and the percentage who scored a three or higher.
Table 2

AP Score Summary

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Candidates</th>
<th>Percent with 3 or Higher</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>322</td>
<td>83%</td>
</tr>
<tr>
<td>2008</td>
<td>358</td>
<td>83%</td>
</tr>
<tr>
<td>2009</td>
<td>312</td>
<td>86%</td>
</tr>
<tr>
<td>2010</td>
<td>301</td>
<td>83%</td>
</tr>
</tbody>
</table>

*Note. The data are from the Mid-Town High School Profile, 2010.*

The Missouri Assessment Program (MAP) is a performance based assessment test that not only assesses a student’s knowledge and skills, but how they can apply that knowledge to new situations. Under No Child Left Behind (NCLB) each state must determine if each individual school is making adequate yearly progress (AYP) toward the goal of having 100% of students meet state academic standards. MTHS administers the 11th grade Communication Art and Science test and the 10th grade Mathematics test. During the 2009 and 2010 school years Algebra 1 was tested. According to DESE data adequate yearly progress at this school was not met for either the math or communication art MAP in 2007, 2008, 2009 or 2010. Table 3 provides further data available from DESE that can help complete a profile for the school.
Table 3

*MTHS Data*

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance</td>
<td>92.6</td>
<td>92.1</td>
<td>92.2</td>
<td>94.2</td>
</tr>
<tr>
<td>FRL Percent</td>
<td>23.3</td>
<td>28.3</td>
<td>31.3</td>
<td>35.4</td>
</tr>
<tr>
<td>Drop Out Rate-Total</td>
<td>4.3</td>
<td>4.0</td>
<td>4.9</td>
<td>4.2</td>
</tr>
<tr>
<td>Graduation Rate</td>
<td>87.3</td>
<td>87.4</td>
<td>87.5</td>
<td>87.3</td>
</tr>
</tbody>
</table>

*Note.* Data are from the High School Accountability Report Card, 2010

The total dropout rate for MTHS is slightly above the Missouri average of 3.5% (MODESE Annual Report of School Data, 2010). Drop out percentage is determined by dividing the number of students whose last withdraw code for the school year indicates dropout by the total number of students in that particular grade level. That percentage is the initial number reported to the state in June, but the school can recover some of those students the following fall. If a dropout from the prior year returns to school in the following year prior to the September count date (which is the last Wednesday in September), the school can recover those students and remove them from the prior year dropout count. The dropout number for the prior year is not solid until October. The district reports dropouts for grades 7-12.

The total graduation rate is around 87.3%, which is slightly higher than the state average of 85.7% (MODESE Annual Report of School Data, 2010). Graduation rates are calculated in much the same way as drop-out percentage except there is no re-count in the fall. Any student who completes graduation requirements prior to June 30th of that school year will be counted as a graduate. Senior students taking summer school and finish up quickly can be counted in the
current school year. If graduation requirements are completed after June 30th, then students are considered graduates for the following school year.

Mid-Town High School has a higher than average student to classroom teacher ratio at 22:1 and student to administrator ratio at 329:1. The state averages are 17:1 for classroom teacher to student ratio and 187:1 for administrator to student ratio (MODESE Annual Report of School Data, 2010). The average school ACT score is 22.4 and approximately 92% of senior students plan on attending a four or two year college (Mid-Town High School Profile, 2010). Approximately 71% of students actually do enroll in a technical or four or two year college (MODESE Annual Report of School Data, 2010).

Population and Sample

A total of 218 students were identified for participation in the Academic Center using nonrandom selection during the 2006-2007 (148 students) and 2007-2008 (70 students) school years. Students were identified at the end of their freshman year based on 9th grade counselor, teacher, and administrative evaluation. Identified students exhibited any number of characteristics linked to at-risk identification. These characteristics included: low SES, low GPA, low attendance, high number of disciplinary referrals, mental health issues, behavior issues, family concerns, drug use, social maladjustment, or juvenile record. However, of the identified students those with 80-85% or better attendance rates and limited discipline referrals are considered priority for program admission. Identified at-risk students were interviewed in the spring of their freshman year for participation in the Academic Center.

After Academic Staff finished these interviews 64 at-risk students were asked to enroll and then self-selected to participate in the Academic Center. Therefore, the “sample” for this
study was actually selected by the Academic Staff, rather than by the researcher. For this reason it was necessary to include interviews with these staff to determine their sampling criteria.

Data Collection

Interviews with five junior high feeder school guidance staff were conducted in order to collect data for research question one. Interviews were requested in order to collect further insights concerning program identification procedures. All selected students were tracked longitudinally for three years. Data required to answer research questions two, three and four for this study came from ESchool, a district wide data program. For the purpose of this study, student ethnicity, gender, FRL status, Academic Center participation, GPA end of freshman, and exit GPA were collected.

Data Analysis-Research Question One

Research Question One: Identification Procedures

The first research question asks feeder school guidance counselors to discuss the criteria and used to identify 9th grade students for referral to the Academic Center. Questionnaire items are presented below.

Guidance Staff Questionnaire

Questionnaire Items:

1. What criteria are used to select students to be considered for the Success Center?
2. Who determined what criteria should be used when selecting students?
3. Who is participating in selecting students?
4. What are students told about the process and the program?
5. Why do you believe that some students are not identified for participation in the Success Center even though they demonstrate similar risk factors?

Interview responses were documented and then examined for any variance in the identification and selection process across junior high schools that might be present. Presentation and analysis of these interviews is presented in Chapters Four and Five.
Data Analysis-Research Questions Two, Three, and Four

The first step in the analysis included generating a set of descriptive statistics from the background characteristics of the students participating in the program. The second research question was answered using a non-parametric statistic. The third and fourth research questions were answered using a parametric statistic. The overall analysis was conducted using the Statistics Package for Social Sciences (SPSS). A brief description of all statistical methods follows.

Research Question Two: Student Graduation Rates

The second research question asks if the graduation rate mean scores of at-risk students who participate in the Academic Center are different than those of at-risk students who did not participate. The independent variable used to address this question is participation in the Academic Center. The dependent variable used to address this question is student graduation. The chi-square test of independence is used to test the hypothesis for this research question.

The chi-square test of independence is a “statistic based on the simple idea of comparing the frequencies you observe in certain categories to the frequencies you might expect to get in those categories by chance” (Field, p. 682). According to Field the chi-square nonparametric test does not require normality of distribution; however, it does have two important assumptions. First, each entry should be independent, meaning that it only occurs in one cell of the contingency table. Second, expected frequencies should be greater than five, meaning that no single cell should have less than five entries. A five percent (0.05) margin of error was used for this study. Results are considered significant if \( p < 0.05 \).
Research Question Three: Student Academic Performance Matching Variables

The third research question asks if the GPA mean scores of at-risk students who participate in the Academic Center are different than those of at-risk students who did not participate when students are matched according to pre-entry characteristics (ethnicity, gender, and FRL status). The independent variables used to address this question are ethnicity, gender, and FRL status. The dependent variables used to address this question are exit GPA. GPA data are continuous and range from 0.000 to 4.000. The paired samples t-test was used to test the hypothesis for this research question.

According to Field (2006), parametric tests are based on four assumptions regarding the nature of the data. These assumptions are that the data are normally distributed, homogeneity of variance is the same throughout the data, data should be measured at the interval level, and the final assumption is that data are independent. The assumptions of the t-test are based on the above mentioned assumptions regarding the nature of data. Data are from normally distributed populations, data are measured at the interval level, variances in populations are roughly equal, and scores are independent—meaning that one particular subject’s scores are not influenced by any other subject or subject’s scores during the study (Field, 2006). A five percent (0.05) margin of error was used for this study. Results are considered significant if p < 0.05.

Research Question Four: Student Academic Performance Controlling A Pre-Entry Characteristic

The fourth research question asks if the GPA mean scores of at-risk students who participate in the Academic Center are different than those of at-risk students who did not participate when the pre-entry characteristic of freshman GPA is controlled. The independent variables used to address this question are ethnicity, gender, and FRL status. The covariate for
this research question is freshman GPA. The dependent variable used to address this question is exit GPA. GPA data range from 0.000 to 4.000. An ANCOVA was used to answer this research question.

The ANCOVA is a parametric test and requires adherence to the same assumptions as does the t-test; normal distribution of data, homogeneity of variance, variables are measured on an interval level, and independent observations. However, the ANCOVA has an additional assumption, homogeneity of regression slopes. According to Field (2006) homogeneity of regression slopes is concerned with the relationship between the covariate and the dependent variable. If we assume there is a positive relationship between the covariate and the outcome, or dependent variable of one of our groups, then we assume that there is a positive relationship between the covariate and all other groups. When we enter a covariate into a regression model “we can see what effect an independent variable has after the effect of the covariate. As such, we control for (or partial out) the effect of the covariate” (Field, p. 364). Field asserts that there are two reasons for including covariates in an ANOVA. First, adding a covariate reduces the within-group error variance which allows us to better assess the effects of the independent variable, and secondly, it can eliminate confounds. Since the literature has shown that GPA is highly correlated to persistence to graduation, then the inclusion of GPA as a covariate allows for the elimination of the bias of the confounding variable.

Variables in the Study

Most of the independent variables selected for this study are established in the literature as identifying characteristics of at-risk students. These variables are at-risk, ethnicity, gender, family SES, and academic achievement.
At-Risk

An extensive body of literature attempts to identify factors or characteristics associated with dropping out; these can include anything from having low self-esteem (Ekstrom, Goertz, Pollack, and Rock, 1986; Rumberger, 1987), to students having adult commitments such as having a child or supporting a family (Ekstrom et al.; Rumberger, 1987; Tyler and Lofstrom, 2009). Much of the literature categorizes characteristics based on the type of risk a student might be faced with.

Field, Wilhelm, Nickell, Culligan, and Sparks (2001), Moore (2006), Suh and Suh (2007), and Tyler and Lofstrom (2009) identify that students can be individually at-risk, meaning that the child could have any number of the following issues: disability, low self-esteem, abuse, and/or trauma are a few of the identified individual at-risk areas. Another category Moore, Suh and Suh, and Tyler and Lofstrom identify is environmental risk. In this category a student’s family presents a risk; this can include, but is not limited to, living in poverty, single parent home, low parent education and/or low SES. A final category identified by Moore, O’Brien et al. (1997) and Tyler and Lofstrom is community. In this category the student’s community environment, which can include the neighborhood or school, presents the risk. Again this can include, but is not limited to, living in an area with a high crime rate, a school with low graduation rates, a community with high rates of teen pregnancy or high rates of poverty. Students who exhibit any number of these characteristics are usually labeled “at-risk” for school failure. A discussion of the issues surrounding the use of the term at-risk was presented in Chapter Two.

Academic Center Participation

Participation in the Academic Center is one of the independent variables and the focus of this particular study. This variable was dummy coded (Academic Center participant = 0,
Academic Center non-participant = 1). As stated previously very little research has been done on how academic transition programs affect academic achievement and graduation rates. This study hopes to contribute to the literature more information concerning this particular variable.

GPA

Studies have shown that the single most important predictor of whether a student will drop out or not is GPA. Rumberger (1987) found that poor academic achievement is associated with higher dropout rate. Battin-Pearson, Newcomb, Abbott, Hill, Catalano, and Hawkins (2000) also concluded that poor academic achievement explained the greatest amount of variance and was the strongest predictor of who would drop out. Investigating GPA further, a study by Barnington and Hendricks (1989) found that high school GPA steadily increased in high school for graduates and steadily declined for dropouts. These findings have been supported by numerous other authors and studies (Barro and Kolstad, 1987; Eckstrom et al., 1986; Rumberger, 1995). The GPA each student earned at the end of their freshman year and at time of exit from high school could range from 0.0000 to 4.0000.

FRL Participation

Research has shown that one of the most important factors concerning family background and structure is family SES. The National Center for Educational Statistics (2004) reported that students from low income families drop out at higher rates than students from middle or high income families. This conclusion has been supported by numerous authors and studies (Barro and Kolstad, 1987; Mare, 1980; NCES, 1992; Rumberger 1983, 1987, 1995). For the purpose of this study family SES level will be studied through student FRL status. This variable was dummy coded (Non-FRL participation = 0, FRL participation = 1). District qualification guidelines for free and reduced lunch are listed in the following table.
Table 4
District Qualification Guidelines for Free and Reduced Lunch

Your children may qualify for free or reduced price meals if your household income falls within the limits on this chart.

<table>
<thead>
<tr>
<th>Household size</th>
<th>Yearly</th>
<th>Monthly</th>
<th>Weekly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20,036</td>
<td>1,670</td>
<td>386</td>
</tr>
<tr>
<td>2</td>
<td>26,955</td>
<td>2,247</td>
<td>519</td>
</tr>
<tr>
<td>3</td>
<td>33,874</td>
<td>2,823</td>
<td>652</td>
</tr>
<tr>
<td>4</td>
<td>40,793</td>
<td>3,400</td>
<td>785</td>
</tr>
<tr>
<td>5</td>
<td>47,712</td>
<td>3,976</td>
<td>918</td>
</tr>
<tr>
<td>6</td>
<td>54,631</td>
<td>4,553</td>
<td>1,051</td>
</tr>
<tr>
<td>7</td>
<td>61,550</td>
<td>5,130</td>
<td>1,184</td>
</tr>
<tr>
<td>8</td>
<td>68,469</td>
<td>5,706</td>
<td>1,317</td>
</tr>
<tr>
<td>Each additional person:</td>
<td>+6,919</td>
<td>+577</td>
<td>+134</td>
</tr>
</tbody>
</table>

Gender

Alspaugh (1999) in an ex post factor study that explored the relationship between gender and dropping out established that boys have a harder time transitioning to high school and that consistently more males than females drop out. Allensworth and Easton (2007) also concluded that even when accounting for 8th grade test scores and absenteeism rates, “boys in the same high school with similar backgrounds failed one semester more on average than girls” (2007, p. 22). Greene and Winters (2006) found that nationally, girls graduate at a higher percentage, 72%, than boys, 65%. These research conclusions have been supported by other authors and studies; (Battin-Pearson, Newcomb, Abbott, Hill, Catalano, and Hawkins, 2000; NCES, 1983; Rumberger, 1983, 1987) Related to gender a number of studies have found correlations between gender and ethnicity. Whiting (2006) determined that black males have the highest dropout, expulsion, and suspension rates. Greene and Winters calculated graduation rates for the 100
largest school districts in the United States for the class of 2003 and found that 59% of African-American females graduate while only 48% of African-American males graduate. Further, 58% percent of Hispanic females graduate as compared to 49% for Hispanic males. Gender was dummy coded (male = 0, female = 1).

Ethnicity

Many studies have been conducted on the effects of ethnicity and its relationship to drop out rates. Rumberger’s highly cited study from 1987 found that members of racial and ethnic minorities are more likely to drop out of school than white students. This finding was also seen in the Greene and Winters (2006) study which found that nationally, 78% of white students graduate, 55% of black students graduate and 53% of Hispanic students will graduate high school. As with many of the other variables used in this study, these findings were supported by other authors, (Eckstrom et al. 1986; NCES, 1983, Rumberger, 1995). The ethnicity data were converted into two categories, white and minority. The data were then dummy coded (white = 0 and minority = 1).

The period of transition from one grade span to another usually produces a certain amount of stress and anxiety for almost all students. The transition from middle school or junior high to high school may introduce changes in environment, education practices and social structures to which the student must adapt (Akos & Galassi, 2004; Mizelle, 2005; Rice, 1997; Smith, 1997). These studies found that many of the changes associated with the transition to high school can overwhelm a student, thereby decreasing motivation, achievement, and persistence to graduation. Transitional achievement loss can lead to students falling behind or dropping out, increasing both local and statewide dropout percentages. Students who are considered at-risk face an even greater challenge when transitioning to high school.
Protection of Human Subjects

This proposed study adheres to all the guidelines outlined by the University of Missouri-Columbia’s Institutional Review Board (IRB). The IRB has conducted an examination of all of the processes and procedures utilized in this study. No students were directly contacted for this study; however, in order to maintain student record confidentiality ID numbers were used by the counselors who gathered the initial data. Five guidance counselors from two feeder schools were sent recruitment emails. Three of the five responded that they would participate. Letters of consent were then emailed to participants. The letter of consent indicated that the interview was confidential and voluntary. Please refer to Appendices B and C for a copy of those letters.

Limitations

A few notable study limitations should be addressed at this point. The student identification procedures, though detailed, are still open to human interpretation and therefore subjective. This could lead to students who would benefit from the program being overlooked or possible over-identification of students because they exhibit certain characteristics. Transferability is a limitation as this is a case study of one Midwestern high school. Focusing on one institution limits the ability to generalize findings beyond other institutions with similar characteristics. The transitional program being evaluated, the Academic Center, is a program unique to this one particular high school. Also, this particular high school transitions at the 10th grade level, while many high schools around the United States transition at the 9th grade level. Lastly, this study is using FRL as a proxy for SES. However, since not all students who qualify for FRL participate in the FRL program data might be skewed due to under-identification of qualified participants.
These limitations should not impede research on this particular topic; recognizing these limitations can help create a more rigorous and valuable study. Possible findings of the proposed research would provide further information about the transition experience for students considered at-risk.

Summary

This chapter provided an overview of the methods and procedures utilized in this study. This overview included a statement of the research questions, methodology, research design, data sources, population, data collection procedures, data analysis methods, and limitations.

This in an evaluation study using a logic model evaluation approach. The outcome elements of the logic model are used as the foundations of the research questions. Specifically this study investigated criteria used to identify 9th graders for referral to the Academic Center and mean differences in academic performance and persistence towards graduation between at-risk students who participate in a high school transition program and at-risk students who do not participate. Chapter Four presents the data concerning the four research questions and an analysis of those data.
Chapter 4

ANALYSIS AND PRESENTATION OF DATA

Introduction

The first chapter of this study presented information on the development of the Mid-Town High School Academic Center, a transition program to address low academic achievement and graduation rates of students considered at-risk of school failure. Chapter Two provided an overview of the literature regarding the term at-risk; prevention programming and issues students face during a transition were also discussed. Chapter Three presented the results of the Academic Center logic model and then described the setting, population, variables, data collection methods, and data analysis processes that were utilized for the study. This chapter presents results from guidance responses, descriptive statistics of the data, and results of the data analyses that address research questions R2, R3, and R4.

Overview

Results of guidance interviews will be discussed first since they explain the selection of the sample of students from the total population of those eligible.

Research Question One

This portion of the study attempted to gain further depth and understanding of the selection processes utilized by feeder schools to determine if a student was considered at-risk and therefore eligible to be considered for placement in the Academic Center. The first four questions focused on selection criterion, processes, and decisions. It was hoped that they would provide greater perspective, reasoning, and insight concerning the selection criterion and processes from the individuals who make those determination. The final question focused on guidance counselors’ thoughts concerning the comprehensiveness of the process.
Recruitment emails were sent out to five guidance counselor staff members from two feeder schools (see Appendix B). For the purpose of this study, feeder schools will be identified as feeder school A and feeder school B. Within one week three of the five counselors responded that they would be interested in participating in the study. One counselor was from feeder school A and two from feeder school B. Letters of consent were then emailed to those participants that indicated that participation was voluntary and confidential (see Appendix C) and returned to the researcher either scanned or faxed. Listed below are the five questionnaire items and a synthesis of the responses provided by the guidance staff. In some cases actual quotes from guidance staff will be used to provide a more detailed analysis.

Research Questions:

1. **What criterion is used to select students to be considered for the Success Center?**
   Interestingly, the guidance counselor from feeder school A stated “there is no set criterion for Academic Center of which I am aware.” Responses from feeder schools A and B indicated that they used similar criteria; however some variance was noted between the two feeder schools. Both feeder schools start with D and F students. Students on the D and F list with poor attendance or who are seen as behavior problems are eliminated. Variance occurs with feeder school A as they expand their search beyond failing students; “when I do selections, I try to find kids on the bubble who would benefit from extra help, kids who may need help with the transition, not just kids who have failed everything.”

2. **Who determined what criterion should be used when selecting students?**
   Neither of the feeder schools indicated that there was an individual or group that determined criteria for student selection.
3. **Who is involved in selecting students?**

Both feeder school A and B utilize a core selection team that initiates the project. The core selection team includes guidance counselors, administration, and 8th grade teacher input. Feeder school A also included input from the home school coordinator and outreach counselor. The home school coordinator acts as a liaison between parents and junior high teachers and administration. The junior high outreach counselor addresses such issues as drug abuse, truancy, sexuality, problems at home and/or poor school performance.

4. **What are students told about the process and the program?**

Again, responses from both feeder schools varied slightly. The guidance counselor from feeder school A stated that she just tells identified students what she personally knows about the program “it is a place (study hall) where they can get more individualized attention and help.” Neither guidance counselors from feeder school B indicated that they tell students anything about the program. However, both feeder schools indicated that Academic Center staff takes on this responsibility and once initial selections are made the Academic Center guidance staff makes the first contact and provides program information.

5. **Why do you believe that some students are not identified for participation in the Success Center even though they demonstrate similar risk factors?**

The responses for this question illustrated the continued variance between the two feeder schools. The guidance counselor from feeder school A stated “The academic center is so wishy-washy. There really aren’t set criteria-it depends on who you ask. So it is difficult for us to determine who we should recommend. Is it just for F kids? Bubble kids?”
Mentally ill kids? A combination of both? Sometimes kids are identified, but they choose not to participate. But really, I think a lack of clear criterion is the main problem.” In contrast, the lead guidance counselor from feeder school B stated “I feel we do a pretty thorough job since we have many levels to refer students to the program. Also, if we miss a kid, they have moved in during the summer or they have “changed” since 8th grade or other factors are going on in their own lives.”

Quantitative Data Overview

This study examined mean scores of at-risk students who participated in the Academic Center to at-risk students who did not participate to determine if there were any significant differences in academic achievement and graduation rates between the two groups.

Data for this study were obtained from ESchool, a district wide data program and converted into a SPSS version 19 database. All students identified as at-risk at the end of their freshman year during years 2006 and 2007 were included in the original database (n = 218). Data were then cleaned and prepared for analysis. It was noted that the exit GPA had 13 missing variables. The missing variables were replaced with the group mean of 1.614 through variable transformation. None of the students with missing exit GPA were included in the final study group. As a part of the initial analysis, a number of diagnostic tests were run on the data in order to test parametric assumptions.

The Kolmogorov-Smirnov and Shaprio-Wilk tests of normality of distribution were run on the freshman GPA and exit GPA data. The results revealed that data distributions for these variables did not display a significant departure from normality. Levene’s test of homogeneity of variance was also run on the freshman GPA and exit GPA. The results indicated that the error variances of the data were not significant and therefore the homogeneity of variance assumption
is tenable. Variables were also screened for outliers or extreme values, of which none were found. Students were then sorted based on Academic Center participation or non-participation and matched based on the pre-entry characteristics of gender, ethnicity, and FRL status. This matching procedure produced an $N = 55$ pairs. The following section provides descriptive statistics of the variables used in the study.

**Pre-Entry Characteristics**

Freshman GPA was used as a pre-entry characteristic. Freshman GPA had a mean of 1.6630 ($SD = .775$). Skewness ($s = .405$) and Kurtosis ($k = -.114$) were found to be within acceptable levels. Mean freshman GPA of identified at-risk students who participated in the Academic Center was 1.4501 ($SD = .661$). Mean freshman GPA of identified at-risk students who did not participate in the Academic Center was 1.876 ($SD = .826$).

The total number of students within this sample ($n = 110$) were coded into one of two ethnicity groups based on school record data. The largest group was minority ($n = 58$), this group included African-American ($n = 56$) and Asian-American ($n = 2$). The white category was slightly smaller ($n = 52$). In regards to gender, females made up 53% of the sample ($n = 58$) compared to males ($n = 52$). As discussed in Chapter Three, FRL was used as a proxy for SES. As students were matched based on gender, ethnicity, and FRL status, exactly 50% ($n = 55$) of the students participated in the FRL program.

**Other Characteristics**

Exit or graduation GPA was used as a dependent variable for research question two. GPA was calculated at the time a student exited high school either as a drop-out or as a graduate. Exit GPA has a mean of 1.581 ($SD = .745$). Skewness ($s = .304$) and Kurtosis ($k = .034$) were found to be acceptable. Mean exit GPA of at-risk students who participated in the Academic Center was
Mean freshman GPA of at-risk students who did not participate in the Academic Center was 1.7408 ($SD = .848$).

Student graduation was used as a dependent variable for research question number two. In this study 44% ($n = 48$) graduated high school. Graduation numbers, when broken down by Academic Center participation, found that of at-risk students who participated in the Academic Center 34.5% ($n = 19$) graduated and 52.7% ($n = 29$) of at-risk students who did not participate in the Academic Center graduated.

At-risk student participation in the Academic Center was the final characteristic. Research questions R2, R3, and R4 analyzed mean differences between at-risk students who participated in the Academic Center as compared to at-risk students who did not participate. Research question three matched at-risk students who participated in the Academic Center to at-risk students who did not participate in the Academic Center based on gender, ethnicity and FRL status. Therefore 50% ($n = 55$) of the sample participated in the Academic Center.

Research Question Two

The null hypothesis for research question number two posits that there is no significant difference between the graduation rate mean scores of at-risk students participating in the Academic Center during their transition to high school and at-risk students who do not participate. As discussed in Chapter Three, SPSS was used to conduct a chi-square test of independence on the entire data set ($n = 110$) to answer this question. The independent variable used to address this question is participation in the Academic Center. The dependent variable used to address this question is student graduation.

As presented in Table 5, the results indicated statistically significant differences in the graduation rates for at-risk students who participated in the Academic Center (36.5%) and at-risk...
students who did not participate (63.5%); $\chi^2(1, N = 110) = 7.149, p = .008$. Null hypothesis number one was rejected. Therefore, the persistence rate mean scores of at-risk students participating in the Academic Center (36.5%) during their transition to high school was significantly different (lower) than at-risk students who did not participate (63.5%).

Table 5
Chi-Square Summary Table Comparing Academic Center Participant and Non Participant Graduation or Persistence Rates

<table>
<thead>
<tr>
<th>Group</th>
<th>Grad/Persist</th>
<th>Non-Graduate</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACP</td>
<td>19</td>
<td>36</td>
<td>55</td>
</tr>
<tr>
<td>Row Percent</td>
<td>36.5</td>
<td>62.1</td>
<td></td>
</tr>
<tr>
<td>ACNP</td>
<td>33</td>
<td>22</td>
<td>55</td>
</tr>
<tr>
<td>Row Percent</td>
<td>63.5</td>
<td>37.9</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Statistic</th>
<th>df</th>
<th>Value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square</td>
<td>1</td>
<td>7.149</td>
<td>.008*</td>
</tr>
</tbody>
</table>

*p<0.05

Research Question Three

The null hypothesis for the third research question posits that there is no significant difference between the exit GPA mean scores of at-risk students participating in the Academic Center during their transition to high school and at-risk students who do not participate when matched according to pre-entry characteristics (ethnicity, gender, and FRL status). As discussed in Chapter Three, SPSS was used to conduct a paired samples t-test on the entire matched data set (n = 55) to answer this question. The dependent variable used to address this question would be exit GPA. GPA data range from 0.000 to 4.000.

As indicated in Table 6, a paired samples t-test revealed a statistical difference between the mean exit GPA of identified at-risk students who participated in the Academic Center ($M =$
1.4217, $SD = .5928$) and identified at-risk students who did not participate in the Academic Center ($M = 1.7408, SD = .8481$), $t(54) = -2.452, p = .017$. Null hypothesis number three was rejected. Therefore, the exit GPA mean scores of at-risk students participating in the Academic Center (1.4217) during their transition to high school was significantly different (lower) than at-risk students who do not participate (1.7408) when matched according to pre-entry characteristics (ethnicity, gender, and FRL status).

Table 6

Paired T-Test Summary Table Comparing Academic Center Participant and Non Participant Exit GPA

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Std Dev.</th>
<th>t_value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Center</td>
<td>1.4217</td>
<td>.5928</td>
<td>-2.452*</td>
</tr>
<tr>
<td>Academic CenterNP</td>
<td>1.7408</td>
<td>.8481</td>
<td></td>
</tr>
</tbody>
</table>

* $p<0.05$

Research Question Four

The null hypothesis for the fourth research question posits that there is no significant difference between the exit GPA mean scores of at-risk students participating in the Academic Center during their transition to high school and at-risk students who do not participate when the pre-entry characteristic of freshman GPA is controlled. As discussed in Chapter Three, SPSS was used to conduct an ANCOVA on the entire prepared dataset ($n = 110$) to answer this question. The independent variables used to address this question are ethnicity, gender, and FRL status. As each independent variable is categorical they were dummy coded for the purpose of the analysis. The covariate for this research question was freshman GPA. The dependent variable used to address this question would be exit GPA. GPA data range from 0.000 to 4.000.

A customized ANCOVA was run to test the assumption of homogeneity of regression slopes. As noted in Table 7, the Academic Center and freshman GPA outcome interaction is not
significant; $F_{\text{AcadC/FrGPA}}(1, 106) = 2.318, p = .131$. Therefore, the assumption of homogeneity of regression slopes is tenable.

Table 7

ANCOVA Summary Table Testing the Assumption of Homogeneity of Regression Slopes for the Covariate

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>TYPE III SS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>AcadC/FrGPA</td>
<td>1</td>
<td>.523</td>
<td>2.318</td>
<td>.131</td>
</tr>
</tbody>
</table>

The results of the analysis of covariance presented in Table 8, indicated that the covariate, freshman GPA, was significantly related to the exit GPA; $F(1, 107) = 146.249, p = .000$. However, there was no significant effect of Academic Center participation on exit GPA after controlling for the effect of freshman GPA, $F(1, 107) = .001, p = .977$. Null hypothesis four failed to be rejected. Therefore, there was no significant difference between the exit GPA mean scores (1.4217) of at-risk students participating in the Academic Center during their transition to high school and the exit GPA mean scores (1.743) of at-risk students who do not participate when the pre-entry characteristic of GPA is controlled.

Table 8

ANCOVA Summary Table for At-Risk Academic Center Participants and Non-Participants Mean Exit GPA Controlling for Freshman GPA

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Type III SS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>FreshmanGPA</td>
<td>1</td>
<td>33.388</td>
<td>146.249</td>
<td>.000</td>
</tr>
<tr>
<td>AcademicCenter</td>
<td>1</td>
<td>.000</td>
<td>.001</td>
<td>.977</td>
</tr>
</tbody>
</table>
Summary

As outlined in Chapter Three, this study used guidance responses from an open ended questionnaire to determine criterion to identify 9th graders for referral to the Academic Center and statistical tests to examine if participation in the Academic Center increased academic achievement and graduation persistence rates for identified at-risk students. Data for research question one revealed slight variance in criterion and identification procedures as reported by guidance counselors at feeder schools A and B. Null hypothesis two states that there is no significant difference between the graduation rate mean scores of at-risk students participating in the Academic Center during their transition to high school and at-risk students who do not participate. Null hypothesis two was rejected. Therefore, the graduation rate mean scores of at-risk students participating in the Academic Center (36.5%) during their transition to high school was significantly different (lower) than at-risk students who did not participate (63.5%). Null hypothesis three states that there is no significant difference between the exit GPA mean scores of at-risk students participating in the Academic Center during their transition to high school and at-risk students who do not participate when matched according to pre-entry characteristics (ethnicity, gender, and FRL status). Null hypothesis three was rejected. Therefore, the exit GPA mean scores of at-risk students participating in the Academic Center (1.4217) during their transition to high school was significantly different (lower) than at-risk students who do not participate (1.7408) when matched according to pre-entry characteristics (ethnicity, gender, and FRL status). Null hypothesis four states that there is no significant difference between the exit GPA mean scores of at-risk students participating in the Academic Center during their transition to high school and at-risk students who do not participate when the pre-entry characteristic of
GPA is controlled; null hypothesis four failed to be rejected. Chapter Five will further explore these results.
Chapter 5

DISCUSSION, CONCLUSIONS, AND IMPLICATIONS

Introduction

The final chapter will present a discussion of the results presented in Chapter Four. The first section will present a brief overview of the study. The next section presents the logic model evaluative findings of each hypothesis in relationship to how those analyses supports, contradicts, or extends previous literature. Practice and research implications of the study will be then be discussed and suggestions for future educational research on this topic will be reviewed. The chapter will conclude with a discussion of study limitations and summary.

Overview

This study used questionnaire data from feeder school guidance counselors to examine criteria to identify 9th graders for referral to the Academic Center and institutional records of a large Mid-Western public high school to examine the academic performance and graduation rates of at-risk students who participated in the Academic Center as compared to at-risk students who did not participate. Specifically, this study sought to answer four research questions.

R1-What criteria are used to identify 9th graders for referral to the Academic Center?
R2-Are the graduation rate mean scores of at-risk students participating in the Academic Center during their transition to high school different from at-risk students who do not participate?
R3-Are the exit GPA mean scores of at-risk students participating in the Academic Center during their transition to high school different from at-risk
students who do not participate when students are matched according to pre-entry characteristics (ethnicity, gender, and FRL status)?

R4- Are the exit GPA mean scores of at-risk students participating in the Academic Center during their transition to high school different from at-risk students who do not participate when the pre-entry characteristic of freshman GPA is controlled?

A logic model evaluation approach was utilized to analyze program outcomes. As discussed in Chapter Three, questionnaire data were used for research question one and statistical data were used for research questions R2, R3, and R4. Feeder school guidance counselor interview responses were analyzed for research question one. For research question number two a chi-square test of independence was used to determine if the graduation rate mean scores of at-risk students who participate in the Academic Center were different than those of at-risk students who did not participate. The independent variable used to address this question was participation in the Academic Center. The dependent variable used to address this question was student graduation. For research question number three a paired samples t-test was used to determine if the GPA mean scores of at-risk students who participate in the Academic Center were different than those of at-risk students who did not participate when students are matched according to pre-entry characteristics (ethnicity, gender, and FRL status). The independent variables used to address this question were ethnicity, gender, and FRL status. The dependent variables used to address this question were exit GPA. GPA data are continuous and range from 0.000 to 4.000. For research question number four an ANCOVA was used to determine if the GPA mean scores of at-risk students who participate in the Academic Center were different than those of at-risk students who did not participate when the pre-entry characteristic of freshman GPA is controlled. The independent variables used to address this question were ethnicity, gender, and FRL status.
The covariate for this research question was freshman GPA. The dependent variable used to address this question was exit GPA. GPA data range from 0.000 to 4.000.

**Logic Model Evaluative Findings**

The development of the Academic Center, as discussed in Chapter One, was a proactive response to proposed NCLB legislation. One of the four key pillars of NCLB is accountability “to close the achievement gap and make sure all students, including those who are disadvantaged, achieve academic proficiency” (United States Department of Education, 2004). The state of Missouri uses MAP data to measure academic proficiency levels of students in reading and math in order to determine AYP. In addition to assessing academic proficiency NCLB requires schools to report percentage of students who graduate with a regular diploma in four years. Mid-Town High School was pro-active in the development of an in-school prevention program targeting low academic achievement and graduation rates of students considered at-risk for school failure.

The Academic Center targeted transitioning sophomores considered at-risk in order to address a number of issues. First, all students can have difficulties with the transition to high school, but difficulties are often greater for students considered at-risk of school failure. Secondly, at-risk students often need to recover credits in order to stay on track for graduation. Lastly, students considered at-risk for school failure often do not persist to graduation.

In order to accomplish proposed activities several inputs were required by the school, Academic Staff personnel, and feeder school guidance counselors. The school provided two Academic Staff members and one individual who coordinates program placement and is the dedicated guidance counselor for the program. Facilities, equipment, and supplies were also provided by the school. At the feeder school level, guidance counselors, administrators, and
teachers had input on identifying students who they considered at risk of school failure. However, lack of identification consistency between the two feeder schools could be a contributing factor to the observed statistical outcomes.

R1-What criteria are used to identify 9th graders for referral to the Academic Center?

Variance in criteria and identification consistency was illustrated by the questionnaire response data at all levels. The first question asked participants to identify the criterion used to select students for the Academic Center. Though both feeder school A and B begin with the same criterion, D and F students who are motivated to attend school and have adequate attendance, feeder school A also includes bubble kids. The guidance counselor from feeder school A uses the term bubble kids to include students who perhaps do not do well academically but do not receive any type of district interventions or special services such as an individualized education plan (IEP), and also includes those students who could use extra help with the transition because of social or emotional issues. Again, this particular type of student would not receive any type of district intervention or special services. Feeder schools could, therefore, be recommending two different types of students; those who have D’s and F”s and those who may have better grades, but could use help with the transition due to other factors. Previous literature has illustrated that GPA is a strong predictor of who will drop out (Battin-Pearson, Newcomb, Abbott, Hill Catalano, & Hawkins, 2000; Barro & Kolstad, 1987; Eckstom et al., 1986; Rumberger, 1987, 1995). Without precise identification of the type of at-risk student -- those who either have D”s or F”s or those students viewed as needing extra transition help -- it is hard to make accurate outcome determinations. Statistical analyses would need to be run on each type of student to see if there are mean differences between them and if those differences indicate positive or negative outcomes for students participating in the Academic Center. Some of the variance in
recommendation criterion could be attributed to total student population variances between feeder school A and feeder school B and should be discussed.

Feeder school A and feeder school B have vastly different ethnic and FRL populations (see Appendix D), which in turn, could influence recommendation criterion and type of student recommended for program placement. According to state data, feeder school A has a total minority population of 40.7%, of which 32.5% were African American. Feeder school B has a total minority population of 26.6%, of which 17.2% were African American. FRL numbers also show similar disparities between the two schools. At feeder school A, 51.6% of students are eligible for FRL while 25.2% of students are eligible for FRL at feeder school B. This type of diversity between schools could influence what type of student guidance counselors from each feeder school identify and recommend. Data on each student who is recommended to the program would need to be disaggregated to see if feeder school guidance counselors’ recommendations match the schools socio-economic and ethnic make-up. The next question was directly related to the first and responses illustrated an interesting problem.

Question two asked participants to state who determined Academic Center selection criteria; both schools indicated that there were no individuals or groups that they knew of determining criteria for student selection. This is problematic, without definite criteria and selection procedures, feeder schools will develop their own criteria and selection procedures and variance will occur. This was seen in the discussion of the first question and will be illustrated again in question three and five.

Question three asked participants to identify individuals involved in the selection process. Both feeder schools start with a similar core selection team consisting of guidance staff, administration, and teacher input. However, feeder school A also utilizes input from the school’s
crisis counselor and home school coordinator. The thoughts and observations of these two individuals can provide greater insight to a student’s home life or personal issues than perhaps a teacher, administrator, or even guidance counselor might be privy to. Greater knowledge of all aspects of a student’s life could provide better means to more accurate identification of at-risk students.

Question four asked participants to discuss what students were told about the selection process and programs at the feeder school level. Again, though some inconsistency was illustrated by the participant responses for question four, it was probably not of enough importance to make any difference in the statistical outcomes. However, it does show yet another area of discrepancy that should be addressed. The final question provided the most interesting responses and perhaps best illustrated the differences in selection procedures and even thought processes between the two feeder schools.

Question five asked respondents to discuss their thoughts on why some students were not identified for participation in the Academic Center even though they had similar risk factors as identified students. It would seem that feeder school A has definite difficulty with the lack of clear guidance and definition when it comes to identification of at-risk students. Overall, feeder school A seems to have greater breadth and depth in their identification and selection processes; perhaps this is to compensate for the lack of guidance. The expansion of identification beyond just D and F students to include students who could need extra help during the transition and the inclusion of the perceptions of both the home school coordinator and crisis counselor could perhaps help those students who would have been missed and would subsequently experience a tough transition. Feeder school B, as illustrated by the responses, seems to be more task oriented in their selection and identification processes; D and F student’s with acceptable behavior and
attendance are identified by guidance, administration, and 8th grade teacher input. The most interesting, and perhaps telling, assumption of feeder school B was that those students who have similar risk factors but were not selected during identification obviously had changed over the summer or moved in from another district. Feeder school A would seem to have a more comprehensive selection program in order to compensate for lack of district guidance, while feeder school B believes that their selection procedures are on target. It is this type of variance, however, that could affect what type of student is selected. Consequently, type of student has a direct relationship to the statistical outcomes, positively or negatively.

Once identified the Academic Center guidance counselor then has a general meeting with all identified at-risk 9th grade students and distributes program materials which provide an overview of the program along with program goals. Once inputs were provided or accomplished, activities can be initiated in order to address the problem of low academic achievement and graduation rates of students considered at-risk for school failure.

The Academic Center has four major focus areas as illustrated in the activities section of the logic model; academics/study skills, career exploration, social-emotional development, and healthy life style choices. Each activity has been shown in the literature to offer real benefits to at-risk students. Previous research has indicated that at-risk students transitioning into high school were concerned with increased teacher expectations and homework loads (Akos & Galassi, 2004; Isakson & Jarvis, 1999; Kemple, Connell, Klem, Legters, & Eccles, 2005; Mizelle, 2005; Rice, 1997). As discussed in Chapter One, at-risk students often enter high school with less than the expected number of credits and are then forced to somehow squeeze in the missing credits and yearly required courses into their daily schedule. Two of the Academic Center activities, as illustrated in the logic model, are to provide student core content support and
study skills sessions. Students not only receive academic support for core classes, but also the opportunity to earn missing credit through successful participation in the Academic Center. Study skills sessions can help students learn how to study more effectively in order to be a better student. Both activities directly relate to student concerns about teacher expectations and homework loads. Expectations are stated by the core academic subject teacher and then reinforced by the Academic Center teacher. Students also have the opportunity to receive academic support and learn study skills from Academic Center staff to help make homework loads more manageable.

A second area of concern transitioning at-risk students often have is school social structures. Fitting in and making connections combined with increased autonomy can be intimidating to new high school students (Isakson & Jarvis, 1999; Mizelle, 2005). Students often find that fitting in, the demands of homework, studying, jobs, demands of friends, and perhaps extra-curricular activities difficult to juggle. Again, participation in study skills sessions can help students learn how to manage time better in order to be more productive. However, of even greater benefit could be the small group counseling activities, as illustrated in the logic model, to help students make healthy life style choices.

Scaffolding, as described by Dahl (2004) and the Vygotsky’s (1978) Zone of Proximal Development both relate to how a child learns. When an adult or other knowledgeable person provides the guidance and encouragement to help the child overcome an obstacle or problem, learning occurs. The Academic Center provides both academic guidance and social-emotional guidance in this respect. Students are able to get support to overcome academic obstacles and guidance to help overcome social-emotional issues. This then directly relates to Erickson’s ego identity as explained by Thornburg (1986). Ego identity is how adolescents view themselves and
how they perceive the way others view them. With positive adult mentors encouraging them to make healthy life style choices and relaying to the student that they view them as worthy and capable, then the student will begin to view themselves as worthy and capable. A positive self image helps students overcome identity diffusion. Erickson’s identity diffusion, as described by Thomas (2000), occurs when an adolescent does not yet know who they are or where they fit in. As previously discussed, students transitioning to high school are already concerned about fitting in, and fitting in might mean finding acceptance with an unacceptable group. The Academic Center provides focused activities so that, according to our model, students will hopefully find a level of self worth that precludes them from becoming involved with groups that are not making good life choices such as skipping school or doing drugs.

Once activities have been completed the following outputs provide evidence of service delivery. After interviews approximately 75% of the students were enrolled in the program. Three blocks of 110 minutes were available each day with a limit of 20 students per block. The smaller group focus is beneficial as students can sometimes feel lost in a larger seemingly more impersonal high school. Prior literature has shown that school size is often an important environmental concern for students transitioning from a smaller, perhaps more homogeneous junior high, to a larger high school (Akos & Galassi, 2004; Isakson & Jarvis, 1999; Rice, 200). The Academic Center operates five days a week. This type of daily contact allows for the facilitation of individualized plans for each student to deal with the academic demands of the school day, provide individual or small group tutoring to reinforce core class concepts, and time to complete homework. Students would also have the added benefits of a dedicated guidance counselor, career planning opportunities, and the chance to develop a personal connection with an adult who took interest in their life and academic future. Though this study did not collect
qualitative data on affective relationships between student and teachers in the Academic Center, prior research has demonstrated that affective student development and mentoring relationships are an important part of a successful transition program (Lehr et al., 2004; Dynarski, 2001; Dynarski & Gleason, 1999). Once outputs were provided then logic model outcomes could be observed and analyzed.

Logic model outcomes stemmed from Academic Center program objectives of increased academic achievement and increased graduation rates for at-risk students. These outcomes were identified as important to measure as they are relevant to the program’s goals and objectives, they represent meaningful benefits or changes for participants, and it is reasonable to believe that participation in the program could influence the outcomes in some way. They were not seen as too broad that they would be outside the scope of the program’s influence. Lastly, the data collected from these outcome indicators would be beneficial in identifying points of success and/or problems that should be addressed.

Two indicators were used for increased academic achievement, exit GPA mean scores of at-risk students participating in the Academic Center as compared to at-risk students who did not participate. Students were matched based on the pre-entry characteristics of ethnicity, gender, and FRL status. The second indicator was exit GPA mean scores of at-risk students participating in the Academic Center as compared to at-risk students who did not participate when the pre-entry characteristic of freshman GPA was controlled. Data for these indicators were obtained from Eschool, a district wide data program. Advantages of using the district data sources were that data was relatively easily attainable and accessible by request through district personnel. Several disadvantages included value of the data depended on how carefully it was entered into the district program, the existing record did not have all data needed; some exit GPA was
missing and had to be replaced as was discussed in Chapter Three, and quantitative data did not provide any information on participants’ program experiences.

R2-Are the persistence rate mean scores of at-risk students participating in the Academic Center during their transition to high school different from at-risk students who do not participate?

This study examined the graduation rate mean scores of at-risk students participating in the Academic Center as compared to at-risk students who did not participate. The chi-square test of independence indicated a statistically significant difference between the mean scores of the two groups. Interestingly enough, graduation rate mean scores of at-risk students who participated in the Academic Center were found to be statistically lower than at-risk students who did not participate. This is in contrast to prior research by Herlihy (2007) and Munoz (2002). Both these studies found that participation in prevention programs had positive effects on graduation rate. However, similarities between the Academic Center and the detailed programs are few.

Munoz’s (2002) study analyzed the impact of a six month alternative high school dropout prevention program. Herlihy’s (2007) overview of the Talent Development indicates the program included separate settings for all incoming freshman, extended block scheduling to help students make up deficiencies, and provided all staff with coaching and professional development opportunities. Talent Development teachers are also core teachers who interact daily with the student.

Unfortunately, though a number of studies focusing on at-risk student transitions were discussed in the literature review, only the Herlihy (2007) and Munoz (2002) studies analyzed the relationship between transition program participation and graduation rates. Many of the
programs discussed in the literature reviews addressed quantitative effects on student attendance, grade point average, or discipline records (Dynarski & Gleason, 1999; Munoz, 2002; Quint et al., 1999; Herlihy, 2007) or qualitative effects such as student and teacher school satisfaction, student autonomy, student engagement levels or student commitment (Dynarski, 2001; Dynarski & Gleason, 1999; Quint et al., 1999, Fairbrother, 2008).

This poses an interesting conundrum. If prevention programs are being developed in response to NCLB requirements to aid in student academic achievement so that graduation rates improve as was discussed in Chapter One, then why is there not a significantly greater amount of literature showing the correlations between transition program participation and graduation rates? Obviously, generalizability of programs such as these to other programs is very limited. Unless programs, context, and perhaps even community and school setting are exactly identical it is hard to compare statistical results.

R3-Are the exit GPA mean scores of at-risk students participating in the Academic Center during their transition to high school different from at-risk students who do not participate when students are matched according to pre-entry characteristics (ethnicity, gender, and FRL status)?

For this research question this study examined the exit GPA mean scores of at-risk students participating in the Academic Center as compared to at-risk students who did not participate when students were matched according to the pre-entry characteristics of ethnicity, gender, and FRL status. The paired samples t-test indicated that the exit GPA mean scores of at-risk students participating in the Academic Center during their transition to high school was significantly lower than at-risk students who did not participate in the Academic Center when matched according to the pre-entry characteristics of ethnicity, gender, and FRL status.
Though this study did not specifically address mean differences between different ethnicities, genders, or students participating in the FRL program, prior research shows that these characteristics are correlated with increased drop out incidents and are important variables to consider. For that reason, the following studies should be mentioned in relation to research question number two and three.

Numerous authors and studies have linked SES to drop out rates illustrating that students from low SES families drop out at higher rates than students from middle or high SES families, (Barro & Kolstad, 1987; Mare, 1980; NCES, 1992, 2004; Rumberger, 1983, 1987, 1995). However, results concerning SES are mixed. Catterall’s study using NELS:88 data found that after controlling for SES there were no significant differences in dropout probabilities between African American students and white students, Hispanic students still had higher dropout rates even in a controlled model. Concerning gender, a number of studies have found that boys have a harder time transitioning to high school than girls and consistently more males drop out of high school than females (Alspaugh, 1999; NCES, 1983; Rumberger 1983, 1987). Lastly, prior research has been conducted on the effects of ethnicity and its relationship to drop out rates. Many have found that minority students are more likely to drop out of high school than white students (Eckstrom et al., 1986; Greene & Winters, 2006; NCES, 1983; Rumberger, 1987, 1995).

Prior research results, in general, have been mixed concerning increased academic achievement and prevention programming. Dynarski and Gleason (1999) synthesized data from 85 schools who received funding from the U.S. Department of Education’s School Dropout Demonstration and found that reform efforts focused on changing classroom experiences for at-risk students led to improved grades. Herlihy’s (2007) evaluation of Talent Development’s Ninth-Grade Success Academy also found positive effects for at-risk students who participated
in the program concerning grade point average. These results are in contrast to the Quint et al. (1999) analysis that found that Project Transition had no impact on at-risk student grade point average.

The results of this particular study could not be directly compared to other research studies as there were no studies in the literature that matched at-risk students who participated in a transition program to at-risk students who did not participate based on their ethnicity, gender, and FRL status. However, it is interesting to note that Smith (1997) found that schools with prevention programs had higher SES status and parent involvement than schools without prevention programs. Perhaps schools with higher SES and parent participation have greater resources and/or access to resources which allow them to coordinate and develop programs such as transition programming. Further empirical research would need to be completed to analyze this connection.

R4- Are the exit GPA mean scores of at-risk students participating in the Academic Center during their transition to high school different from at-risk students who do not participate when the pre-entry characteristic of freshman GPA is controlled?

For this research question, this study examined the exit GPA mean scores of at-risk students participating in the Academic Center as compared to at-risk students who did not participate when the pre-entry characteristic of freshman GPA was controlled. The results of the correlation coefficients indicated that the covariate, freshman GPA, was significantly related to exit GPA. This is consistent with prior research (Barro & Kolstad, 1987; Barrington & Hendricks, 1989; Battin-Pearson et al., 2000; Eckstrom et al., 1986; Rumberger, 1987, 1995) which has shown that GPA is the single most important predictor of whether a student will drop out or not. Battin-Pearson et al. also concluded that low GPA explained the greatest amount of
variance making it the strongest predictor of who would dropout. The ANCOVA results indicated that there was no significant difference between the exit GPA mean scores of at-risk students participating in the Academic Center during their transition to high school and at-risk students who did not participate when the pre-entry characteristic of GPA was controlled.

Prior research results are, again, mixed. Herlihy’s (2007) analysis of Talent Development’s Ninth Grade Success Academy showed positive effects on GPA for students participating in the program. However, a greater number of articles found the same conclusions as this study concerning program participation and exit GPA. As discussed previously, Quint et al., (1999) analysis of Project Transition indicated that there no impact on the grade point average of students participating in the program. Smith’s (1997) findings indicated that schools with partial programs, targeting only parents and students, appeared effective. However, after covarying out background differences between students, partial program efficacy was negated. The Academic Center at Mid-Town High School would be considered a partial program. Further research should, however, be conducted in this area as Smith also found that when covarying school background differences, partial programs were still ineffective, however full programs saw increased efficacy in the areas of academic achievement and increased graduation rates.

As discussed in Chapter Two, outside factors that could have influenced the change hoped for and should be discussed. A number of factors have been identified, beyond program control, which could have influenced the program outcomes. First, student motivation in several areas could influence program outcomes; student commitment to the program, student work ethic, student motivation to graduate. As discussed in Chapter One, students are told they must become an active participant in their education by Academic Center staff. No amount of support or guidance will increase a student’s academic achievement or help them persist to graduation if
they themselves do not actively participate in their education. Similarly, the program has little control over environmental factors in the students’ life. Home life, family situations, a student’s personal life all could influence program outcomes. Often times what happens to students outside of school concerning family or personal life can overwhelm them to the point where school is a secondary consideration.

Other factors that could influence program outcomes are program staff commitment to the program and students. Though staff commitment to the program was not investigated for this particular study, the literature has shown that choice of staff, staff commitment, and personal connections between staff and student are vital to any successful prevention program (Dynarski, 2001; Dynarski & Gleason, 1999; Lehr et al., 2004). Also commitment of core teachers to provide program staff with lesson plans or unit themes could influence program outcomes. If teachers do not provide quality lesson plans, unit themes, or general guidance then Academic Center staff are unable to complete a core function of their job in aiding students with core class work. Students will be unprepared for class and unable to accumulate credits to graduate.

Limitations

All studies have limitations, and this study is no exception. Many of the following limitations have been mentioned in previous chapters, but will be listed and briefly discussed again. Prior to this discussion, it should be noted that a discourse of the limitations should not reduce the importance or impede research in this particular area. Since there are limited numbers of studies that examine transition programming for at-risk students during the first year of transition, and none that use the logic model evaluation approach, new studies in the area can help advance the knowledge base and perhaps inspire future research and study.
1. One of the first limitations to be discussed is program identification procedures. As noted in previous chapters the district provides no written guidance or direction on how the junior high counselors should identify at-risk students. Although the data indicated that the similar procedural methods are utilized at both feeder schools, the lack of specific guidelines is a limitation for replication purposes.

2. The second limitation also stems from program identification procedures. As previously stated, though the similar procedural methods are utilized at both feeder schools, the identification procedures are open to human interpretation and therefore subjective by nature. This could lead to students who would benefit from the program being overlooked or possible over-identification of other students because they exhibit certain characteristics or are a member of a particular ethnic group.

3. Transferability is the next limitation. As this is a study of one Midwestern high school, focusing on one institution limits the ability to generalize findings beyond other institutions with similar characteristics.

4. Next the transition program being evaluated, the Academic Center is a program unique to this particular high school. This particular high school also transitions from junior high to high school at the 10\textsuperscript{th} grade level. Again, the ability to generalize findings beyond other programs with similar characteristics is limited.

5. This study used FRL as a proxy for SES. However, this could be considered a limitation as not all students who qualify for the FRL program participate. Therefore, FRL program data may not be completely representative due to under-identification of qualified participants.
6. Another limitation noted by the researcher concerns the number of students from the 2007-2008 cohort who were actually placed in the Academic Center. According to district records only ten students of 70 were placed in the Academic Center. This number was considerably lower than the 2006-2007 placement numbers. Therefore, data may not be completely representative due to under-identification of students placed in the Academic Center from the 2007-2008 cohort. However, two requests were made for this particular data and both requests can back with the same results.

7. Due to the nature of this research, in an actual school setting, randomization was not possible. At-risk student assignments were made prior to the organization of this study. As discussed in the logic model evaluation for research question one, if type of at-risk student could have been identified (D and F or other) then perhaps statistical outcomes could be more precise.

The final limitation to be discussed is that of the logic model itself. For reference, please see Figure 2 on the following page. Though the logic model is an excellent summative and formative evaluative tool for many programs, it was problematic for this particular type of program. As discussed, the Academic Center program followed the logic model very well, as no flow issues were noted. However, program outcomes were not positive. Overall, the evaluation tends to be inconclusive as several factors emerge prior to the input stage of the logic model that might have contributed to the findings.
Academic Center Logic Model

Inputs

• In order to accomplish activities the program needs to complete the following:

| At-risk students identified by jr. high guidance, administration and teacher evaluation |
| Program materials distributed to prospective at-risk students |
| The high school provided 2 Academic Staff members and 1 guidance counselor and facilities |

Activities

• In order to address the problem the program will conduct the following activities:

| Interested students interview for program. |
| Services: Guidance Counseling Career Planning Study Skills Sessions Academic Support for core classes |

Outputs

• Once underway or completed the activities will produce the following evidence of service delivery:

| Approximately 75% of interviewed students enroll in the program. |
| Provide services to enrolled at-risk students |
| Collaboration Work with core teachers to obtain unit themes and assignments. Work with students to identify academic and affective needs. |

Outcomes

• If activities are completed the following changes could be observed:

| Short-Term |
| Increased academic success for at-risk program participants as compared to at-risk non-participants |
| Increased graduation rates for at-risk program participants as compared to at-risk non-participants |

| Long Term |
| Beyond the scope of this study to measure |

Service Delivery

3 blocks per day
20 students per block
110 minutes per day
5 days a week
First, students can self select to participate or not participate in the program. This could lead to students who would benefit greatly from the program opting out while students who will experience little benefit participating in the program. Secondly, program identification criteria, which were inconsistent between feeder schools, were established and implemented before the inputs stage of the logic model. As each feeder school and high school has its own ethnic, socio-economic, and environmental makeup, it would be hard for one school to dictate identification procedures. As discussed previously, this is especially evident in the differences in total minority population and FRL eligibility between the two feeder schools. There is little evidence of much collaboration between the two feeder schools and the feeder schools and the high school concerning the Academic Center. This type of loose coupling allows for guidance and administration to make policy decisions at a building level that most benefits their school and community contexts. This lack of comparable program identification criterion between feeder schools allowed for greater student variance among the study population. Both of these activities occurred prior to the input level of the model and the logic model has no ability to account for occurrences prior to the input level. It is at this point where the logic model breaks down and makes it perhaps unsuited to use with programs that have loosely interpreted and/or defined prerequisite identification criterion.

Though this study did not find that the Academic Center had significantly positive outcomes, results should be approached cautiously. The limitations of the study and of the logic model itself should be considered along with the recommendations of the researchers before program changes are made. These recommendations will be discussed in the next section.
**Implications for Practice and Future Research**

The results of this study have several implications for current practice and a number of recommendations for future research. First, it is the recommendation of the researcher that the district define the term at-risk as it applies to the Academic Center. One definition suggestion, only applicable to the Academic Center, would be to define at-risk students as low performing students who are still invested in school and also students who face external environmental or individual personal issues that might make the transition difficult. A limited set of examples of environmental or individual issues could include, low SES, disadvantaged neighborhood, teen mother, or individual social or emotional challenges.

It is recognized that the term at-risk, is ambiguous, this has been illustrated by the literature. Numerous authors define at-risk by category or level, (Field, Wilhelm, Nickell, Culligan, & Sparks, 2001; Moore, 2006; O’Brien et al., 1997; Suh & Suh, 2007, and Tyler & Lofstrom, 2009). Other authors posit that being a member of a disadvantaged group, in and of itself; can predispose a student to being considered at risk, (Catterall, 1998; Fairbrother, 2008; Field et al., 2001; O’Brien et al., 1997; Seely, 2004; Wotherspoon & Schissel, 2000). Some authors even posit that schools themselves are the problem, (Wotherspoon & Schissel, 2000; Princiotta & Reyna, 2009). However, the lack of a district definition is problematic. The district should consider undertaking a literature review focusing on definition of the term at-risk in order to come up with a literature based, well-defined meaning of the term that can be used by all feeder schools when identifying students for participation in the Academic Center. This will aid in procedural consistency across feeder schools and provide focus for those participating in the identification processes. Procedural consistency is also the next practice recommendation.
Though at-risk student identification procedures are similar at both feeder schools, some variance does exist. One junior high school only looks at D and F students for participation while the other junior high school also looks at D and F students, but also considers individual who they feel might need extra support during the time of transition. Developing a district wide definition of at-risk as it applies to the Academic Center would hopefully negate a majority of the variance seen in this study. However, beyond the definition, if the district wants consistency in identification procedures then formal policy should be developed that provides specific guidelines and identification procedures. It is the recommendation of the researcher that identification procedures specifically state what type of student should be considered based on district definition of at-risk. It is also the recommendation of the researcher that the selection staff include not only administration, guidance staff and teachers, but also the home school coordinator and crisis counselor. Following this, a step-by-step identification guideline should be developed to be utilized by all feeder schools. These procedures would, again, provide consistency across the feeder schools and act as a guide for those participating in the selection process.

A final recommendation for practice would be to revisit the Academic Center program structure. Data from this study indicates that the graduation rate mean scores of at-risk students participating in the Academic Center (36.5%) during their transition to high school was significantly different (lower) than at-risk students who did not participate (63.5%) and the exit GPA mean scores of at-risk students participating in the Academic Center (1.4217) during their transition to high school was significantly different (lower) than at-risk students who do not participate (1.7408) when matched according to pre-entry characteristics (ethnicity, gender, and FRL status).
It is the recommendation of the researcher that the district restructure the program from a partial academic program to a full program. Previous research has shown that full programs saw increased efficacy in the areas of academic achievement and increased graduation rates (Smith, 1997). Since the district will be moving to from a 10-12 high school to a 9-12 high school this would be an opportune time for change. A full program would include more collaboration between the junior high and high school administration, guidance staff, teachers, parents and students, an academic focus, and also an affective component.

Orientation programs or classes focusing on transition issues should be initiated during the last year of junior high. Examples of programming that could be initiated might include bringing at-risk students to the high school to spend the day as a “high school student”. Being able to meet teachers, wander the halls, meet peers might help ease some transition anxiety. Another program suggestion would be to allow high school administrators, guidance staff, and teachers to meet with at-risk students and their parents to discuss high school expectations. This could be followed by a question and answer session where both at-risk students and their parents have the opportunity to voice their concerns. A final recommendation would be to have the administration, guidance staff, and teachers from feeder schools meet with the administration, guidance staff, and teachers from the high school to discuss transition issues for all incoming students and provide clarification concerning expectations, rules, and regulations at the high school level. These types of collaborative efforts could increase program efficacy helping more at-risk students” graduate from high school.

Developing a program that hopes to increase at-risk student achievement and graduation rates is difficult. The ambiguity of the term itself, the myriad of different programming options, staffing, curricula, etc. can becoming overwhelmingly complex. One element, however, was
prevalent in almost all programs and that was connection to the student. Lehr et al., (2004) reviewed 41 different types of at-risk prevention programs and found that 71% included a personal/affective focus, 49% included an academic focus, and 73% included a mixture of interventions. Dynarski and Gleason (1999) used an experimental design to study sixteen prevention programs and found that choice of teacher was more important than curriculum decisions. The affective component seems to be an important factor in any program and is the first proposal for future research.

As previously discussed students self-select to participate or not participate in the Academic Center. Further qualitative research should be undertaken to analyze and explore the factors that contribute to at-risk students” participation decisions. A second area of future research would be the inclusion of a qualitative component that would capture student perceptions of the Academic Center regarding academic rigor and support and/or other variables that contribute to increased academic achievement and persistence to graduation would be extremely valuable. Fairbrother (2008) used a qualitative research design to explore and analyze themes emerging from data concerning the Springview High School Student Success Program and Mountain Alternative High School. Fairbrother found that student satisfaction with those programs was very high. Student satisfaction measures were based on perceived support, perceived academic benefits, and program personalization. Though empirically the data indicated that participation in the Academic Center did not correspond to increased academic achievement or graduation rates, a qualitative component might indicate other positive benefits from participation not evident through quantitative measures.

The first quantitative recommendation for future research would be to investigate counselor selection patterns at the feeder schools concerning ethnicity and gender to find out
which types of students feeder school counselor find most at-risk. The student population for this particular study had more African-American students and slightly more females than males. Other recommendations for future research would include comparisons between ethnic groups and gender. The basic design of the study could be followed, but data would be further disaggregated by ethnic group or gender to determine if ethnic background impacts academic achievement and graduation rates. Numerous studies have been conducted on the effects of ethnicity and gender and their relationship to drop out rates and academic achievement. Rumberger’s 1987 study found that members of racial and ethnic minorities are more likely to drop out of school than white students. These findings were also supported by other authors, (Eckstrom et al., 1986; NCES, 1983; Rumberger, 1995). In regards to gender studies, Alspaugh (1999) found that consistently more males than females drop out, while Greene and Winters (2006) found that nationally, girls graduate at a higher percentage, 72%, than boys, 65%. Again, these findings have been supported by other authors, (NCES, 1983; Rumberger, 1983, 1987). It would be interesting to see if the data would support those conclusions.

A longitudinal study is also recommended looking at long term outcomes to see if students who participated in the Academic Center enrolled in post-secondary programs at greater rates than non-participants. A final recommendation for future research stems from program changes that have occurred within the past school year.

As of the 2010-2011 school year, the Academic Center program was expanded. Instead of providing transition and support services for at-risk students during their sophomore year, students can now elect to participate in the Academic Center during their junior and senior years. Research should be undertaken that compares mean differences between academic achievement and graduation rates of students participating only their sophomore year to students participating
during all three years of high school to see if the increased academic and affective support results in statistically significant results.

Summary

This study used qualitative interview data to examine 9th grade referral criteria and statistical data from institutional records of a single public high school in the Midwest to examine academic performance and graduation rates of at-risk students who participated in the Academic Center as compared to at-risk students who did not participate. At-risk students who participated in the Academic Center did not have significantly different exit GPA scores when freshman GPA was controlled than non-participating at-risk students. At-risk students who participated in the Academic Center did have significantly lower graduation rates and exit GPA scores when matched according to ethnicity, gender, and FRL status than non-participating at-risk students. While there are some important limitations to this study, it does contribute to the body of research concerning the effectiveness of programming targeting at-risk students’ transition to high school.
References


APPENDIX A

Academic Center Information & Expectations
2009-2010

Personnel
Mrs. *** – Coordinator / Guidance Counselor
Mrs. *** – Teacher
Mr. *** – Teacher

Academic Center Expectations
- **Attendance**: Students will be here each day, prepared, and ready to work.
- **Respect**: Use appropriate language, be honest and truthful, be respectful of peers and adults.
- **Responsibility**: Complete schoolwork during Academic Center time, follow directions, use resources to answer questions, ask for help when needed, contribute to class discussions, work on academics after school to finish homework.
- **Quality**: Show determination to complete tasks, be consistent in quality, focus on the task at hand.
- **Teamwork**: Work as a productive class member by focusing on your priorities, allowing others to work on theirs.

Classroom Rules, Maxims, Dictates, & Other Items
- Food, drink, or candy is **not allowed** in the Academic Center
  - Store bought, bottled water is allowed.
- Cell phones (texting, talking, etc.) are not to be out or on in class.
  - Automatic referral (per school policy) if they are seen or heard in class (this means on vibrate too!)
- Ipods, Mp3 players, music devices, headphones, cameras, video games, movie devices etc. are not to be out or on in class.
- Automatic referral (per school policy) if they are seen or heard in class.
- No profanity
- No sleeping in class
- Computers and collaborative work with other students **must** be approved by teacher.
- Teacher office is Mrs. ***, Mrs. ***, and Mr. *** personal/professional space. Students will not go into the office without express teacher permission.
- Students will complete incident reports at teacher request when class rules/policies are not followed.
- Classroom phone use – Students will not use A.C. phones. Students needing to contact a parent should use a school phone in one of the administrative offices.

Arriving in Academic Center
- All electronics are off and put away before entering classroom.
  - Mrs. ***, or Mr. *** will check while still in hall
  - If electronic devices are out in Academic Center –
    - Referral
• Be in seat before tardy bell rings (If you are not in your seat, have your tardy card ready for teacher checking planners)
  o Have planner out
  o No talking
• Bring materials needed for Academic Center with you
  o Failure to have materials is considered being unprepared for class.
  o No passes to locker for materials – if you must go, you are tardy.
  o You will be allowed 3 free passes during each semester without being required to take a tardy.
    ▪ Locker, bathroom, drink, office, or breakfast.
• If tardy bell rings while you are still in the hall
  o Show tardy card to Mrs. *** or Mr. *** in hall before entering class. Be sure electronic devices are put away.
  o Go to assigned seat without talking to other students and proceed to fill out planner and priorities for the day.
• If you eat breakfast at school:
  o Eat before coming to Academic Center
  o If this causes you to be late, have tardy card ready at the door to class.
• Passes the first 10 minutes of class
  o No passes to restroom or lockers first or last 10 minutes of class
  o Resource passes (KMAC, STARR, Lit Lab, SSRC) may go in first 10 minutes once teacher emails resource
  o Students with a pass from their core class teacher may leave immediately after the bell rings to take a test (ONLY EXCEPTION).
• Students entering/leaving A.C. during class –
  o After pass is signed, students will leave the room quietly without disrupting others. Upon returning, students will knock on locked door to enter and do so without disrupting others.
  o Students should not discuss why another student is entering/leaving the room during class time.
  o If a student is upset/angry when returning to A.C., student will go to office to cool down before returning to class.

Daily Schedule/Procedures
1. Be in your seat with planner out when the tardy bell rings. Students not in the room, or in their seat when bell rings are tardy.
   a. Students not in room before tardy bell – have planner ready for A.C. teacher in hallway and get tardy-card signed before entering class.
   b. Students in class, but not in seat – have planner ready for A.C. teacher checking planners.
2. Planners should be completed and checked by a A.C. staff member in the first five minutes of class. Students should immediately begin working on priorities, even if waiting for planner to be signed. However, if you need a computer, a pass to a resource outside of A.C., or to work with a classmate, please wait for A.C. teacher signature or permission.
3. Work on most difficult priorities during A.C. to best utilize resources. Simpler priorities should be worked on at home or outside of A.C.

4. If you get stuck on an assignment, please discreetly get attention of a teacher. If teacher is working with another student, move on to another portion of the task until a teacher can assist you.

5. Work until the end of class (do not pack up earlier than one minute before dismissal bell).

Daily Expectations of Academic Center Students
- Working in Academic Center – Students will be expected to work independently at their assigned seats unless A.C. teacher grants permission to work with another student or A.C. teacher initiates a study group.
- Group/partner work – students will work cooperatively with academic integrity (NO CHEATING!). Excessive volume/disruption or off task behavior will result in students returning to individual work as well as possible incident form.
- Transition between assignments – Students will move between tasks (one h.w. assignment and another) without disrupting other students. Teacher may issue one warning, but repeated disruption will result in an incident form/possible referral.
- Snacks/Drinks – No snacks or food in the Academic Center. Water bottles are allowed.
- Materials – pencils/pens/paper/folders/etc. are available on emergency or occasional as needed basis. Students will have a pen/pencil before class begins and in assigned seat or will be considered tardy.
  - If students need other materials, A.C. teachers will assist students after planners are checked.

Correction Procedures
- Students off task will be given a verbal warning. Subsequent behavior will result in student filling out incident report and/or referral and parent/guardian contact.
- Students directing verbal/physical aggression towards fellow students will immediately be asked to go to their hall office with a referral.

Dismissal From Academic Center
- The Academic Center is a voluntary program for students that go through an interview process to be accepted into the program.
- Once in the program, students are expected to follow the rules and guidelines.
- Repeated failure to follow rules and/or guidelines as documented through incident reports and referrals may result in a student being dismissed from the Academic Center and assigned to a study hall (NO CREDIT).

Note: Fridays will be reserved for personal enrichment activities, guest speakers, or other Academic Center activities.
Dear Colleague:

You are invited to participate in a research study on the persistence to graduation and academic achievement of identified at-risk students enrolled in a high school transition program as compared to identified at-risk students who do not participate. This study is being conducted for my doctoral dissertation at the University of Missouri. I have already analyzed quantitative data on the topic, but need to add more information in order to clarify certain aspects of the program.

Junior high and senior high counselor input is an integral piece in the selection of students who could qualify for participation in the Success Center. Because of this I would like to include your thoughts and opinions concerning the questions below, via an e-mail dialogue. If you choose to respond, it should take no longer than 30 minutes of your time. I may send follow-up e-mails to be sure I understand the process completely. As explained fully in the Consent Form, you are assured of complete confidentiality. Your participation is purely voluntary and you may withdraw at anytime.

Please read the attached consent form for further information about your participation. I will be contacting you in the next week to see if you would like to participate in this research study. Thank you in advance for your time and effort.

Regards,

Darci Humphrey
University of Missouri
Educational Leadership and Policy Analysis

E-mail Dialogue Questions:

1. What criteria are used to select students to be considered for the Success Center?
2. Who determined what criteria should be used when selecting students?
3. Who is involved in selecting students?
4. What are students told about the process and the program?
5. Why do you believe that some students are not identified for participation in the Success Center even though they demonstrate similar risk factors?
APPENDIX C

Consent Form for School Counselors

Examining the Academic Performance and Persistence to Graduation of At-Risk Students Enrolled In the Success Center
MU Campus IRB Project #1191977

You are invited to take part in an e-mail dialogue on the topic of my dissertation research, a study of the academic performance and graduation of students who have been enrolled in the Success Center at Hickman High School. Your perspective would be very valuable in clarifying certain aspects of placement into the Success Center.

Participation in this research requires your informed, written consent. Please read the following information very carefully so that you understand fully the conditions of participation.

CONSENT FORM FOR PARTICIPATION IN RESEARCH

- I understand that if I volunteer to participate, I will receive a set of questions via e-mail from the researcher, Darci McCannon Humphrey. Responding to the questions should take no longer than 30 minutes. The researcher may send follow-up questions to be sure that she has a complete understanding of the process.

- E-mail responses will be cut and pasted into a word processing file. At that time a code letter or number will be assigned to identify the file of my responses. Only the researcher will have access to this file. It is recommended that you delete your responses from your Sent Mail folder.

- I understand that my name will not appear on any materials collected by the researcher. A code or pseudonym will be used to identify my responses. Any other identifying information, such as the name of my school or district, will also be masked with a pseudonym.

- I understand that when findings are reported, my quotations will not be identifiable. Findings from all participants will be combined into general themes.

- I understand that I do not have to participate if I do not want to. The decision to participate or not participate will not affect my employment. I do not have to answer any question if I choose not to. I can withdraw from participating at any time and, if I want, all information that I gave will be destroyed.

- I understand that potential risks of the project would occur if the researcher failed to keep my name and other information confidential. That is why the above measures have been taken to prevent anyone from identifying me as a participant. I also understand that the study will have potential benefits of informing the schools, school district, and potentially state and national audiences about effects of intervention programs for at-risk students.

Note: The researcher must securely maintain copies of all pertinent information from the study, including e-mails and copies of this written consent form and all other supportive documents, for a period of seven (7) years from the date of completion of the study.

If you have any questions about the study, you may contact me at: McCannonHumphreyD@missouri.edu or my doctor advisor, Dr. Peggy Placier, at placierp@missouri.edu.

You may contact the Campus Institutional Review Board if you have questions about your rights, concerns, complaints or comments as a research participant. You can contact the Campus Institutional Review Board directly by telephone or email to voice or solicit any concerns, questions, input or complaints about the research study.
This information is yours to keep. I will collect the attached Consent Form if you choose to participate. Thank you for considering participation.

**Consent Form for School Counselors**
Examining the Academic Performance and Persistence to Graduation of At-Risk Students Enrolled In the Success Center
MU Campus IRB Project #1191977

I have read the information provided about the above study, and give my permission to Darci McCannon Humphrey participate in the e-mail dialogue referred to above, and to report and publish her findings.

Signature __________________________________
Participant

Signature __________________________________
Researcher

Date ______________
## Feeder School A

### K-12 Enrollment

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<th>2010</th>
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### Students Eligible for Free or Reduced-Price Lunch

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## Feeder School B

### K-12 Enrollment

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<tr>
<td>Indian</td>
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<tr>
<td>White</td>
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### Students Eligible for Free or Reduced-Price Lunch

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Vitae

Darci McCannon-Humphrey was born June 29, 1969 in Moscow, Iowa to Anita and Thomas McCannon. She attended public school in Wilton, Iowa and went on to graduate from Wilton High School in 1987. Darci received her Bachelor of Arts in Speech Communication and Theater from Central College in 1991, a Masters of Education in Gifted Education as well as her teaching certificate from the University of Missouri-Columbia in 1997, an Educational Specialist from the University of Missouri-Columbia in 2007, and a Doctorate of Philosophy from the University of Missouri-Columbia in 2011.

Darci began her teaching career at the Boone Country R-IV School District where she coordinated and taught a K-12 gifted education program. After several years at Boone County R-IV she moved to the Columbia Public Schools where she taught 8th and 9th grade gifted education and speech and theater for seven years and served as a 10th-12th gifted education resource teacher for four years. In 2010 Darci took a job with the Department of Defense and currently coordinates and teaches a K-12 gifted education program at Lajes American School in Lajes, Azores, Portugal.

Darci is married to Donnie, her wonderful and supportive husband. They have two amazing children, Drew and Drake.