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# Achievement, Engagement, and Behavior Outcomes of Youth At Risk Following a Pre-Eighth-Grade Summer Academic Enrichment Program and Participation in a School- Wide, School Year Long, Ownership, Mastery, and Grading Initiative

David K. Alati

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Achievement, Engagement, and Behavior Outcomes of Youth At Risk Following a Pre-Eighth-Grade Summer Academic Enrichment Program and Participation in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative

By

David K. Alati

A Dissertation

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Omaha, Nebraska

2011

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**Abstract**

ACHIEVEMENT, ENGAGEMENT, AND BEHAVIOR, OUTCOMES OF YOUTH  
AT RISK FOLLOWING A PRE-EIGHTH-GRADE SUMMER ACADEMIC  
ENRICHMENT PROGRAM AND PARTICIPATION IN A SCHOOL-WIDE,  
SCHOOL YEAR LONG, OWNERSHIP, MASTERY, AND GRADING INITIATIVE

David K. Alati

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No significant differences in beginning eighth-grade pretest compared to ending eighth-grade posttest California Achievement Test Normal Curve Equivalent Scores were found for youth at risk who completed a pre-eighth-grade summer academic enrichment program where comparisons for reading vocabulary  $t(19) = 0.46, p = .33$  (one-tailed),  $d = 0.107$ , reading comprehension  $t(19) = 1.09, p = .14$  (one-tailed),  $d = 0.253$ , and total reading  $t(19) = 0.67, p = .26$  (one-tailed),  $d = 0.163$  were all in the direction of test score improvement. A significant difference was found for youth at risk who refused the pre-eighth-grade summer academic enrichment program pretest-posttest comparisons for total reading  $t(19) = 2.05, p = .05$  (one-tailed),  $d = 0.473$  but not for reading vocabulary  $t(19) = 1.58, p = .07$  (one-tailed),  $d = 0.351$ , and reading comprehension  $t(19) = 1.65, p = .06$  (one-tailed),  $d = 0.392$ , also where all test scores were in the direction of improvement. No posttest-posttest Analysis of Variance difference was observed for between groups reading achievement test score comparisons. A pattern of significant language test score improvement was found for students at risk who completed a pre-eighth-grade summer academic enrichment program for language expression  $t(19) = 2.30, p = .02$  (one-tailed),

$d = 0.507$  and total language ( $t(19) = 2.05, p = .05$  (one-tailed),  $d = 0.473$  but not for language mechanics  $t(19) = 0.36, p = .36$  (one-tailed),  $d = 0.080$  and students at risk who refused a pre-eighth-grade summer academic enrichment program language expression  $t(19) = 2.70, p = .01$  (one-tailed),  $d = 0.624$  and total language ( $t(19) = 1.95, p < .05$  (one-tailed),  $d = 0.432$  but not language mechanics  $t(19) = 0.88, p = .19$  (one-tailed),  $d = 0.209$ . A similar pattern of improvement was also observed for the math score of students who completed the pre-eighth-grade summer academic enrichment program math computation  $t(19) = 0.03, p = .49$  (one-tailed),  $d = 0.007$ , math concepts and applications  $t(19) = 2.74, p = .01$  (one-tailed),  $d = 0.605$ , and total math ( $t(19) = 1.97, p < .05$  (one-tailed),  $d = 0.428$  but not for students who refused the pre-eighth-grade summer academic enrichment program math computation  $t(19) = -0.094, p = .34$  (one-tailed),  $d = -0.094$ , math concepts and applications  $t(19) = 1.35, p = .10$  (one-tailed),  $d = 0.321$ , and total math ( $t(19) = 0.13, p = .13$  (one-tailed),  $d = 0.029$ . Equipose observed for all average range reading, language, and math posttest-posttest Analysis of Variance comparisons suggests that participation in a school-wide, school year long, ownership, mastery, and grading initiative, rather than summer school completion or refusal, contributed equally to the improved achievement test scores over time for both groups. Classroom grades were both higher and lower at posttest and for the most part were also observed within the average range. Posttest writing scores improved significantly over time for students in both groups with no posttest between group Analysis of Variance difference found. Athletic and activities cumulative participation frequencies were commendably robust with no difference observed for the two groups over a two-year period. Finally, absence behavior frequencies were in the direction of improvement for

students who completed the summer program while tardies and discipline frequencies for students identified as at risk were observed in the direction of significantly higher posttest absences and tardies measures. Study results suggest continuation of the program initiative for the research school's middle school students.

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## CHAPTER ONE

### Introduction

#### Literature Related to the Study Purpose

School success is not optional if youth are to mature from learner to competent and productive members of society. Yet, the rates of school failure in the United States are alarmingly high (Kewalramani, Gilbertson, Fox, & Provasnik, 2007). Middle school may be the most important transition period and a determinant of the school success or failure trajectory for adolescents as they enter high school (Eccles et al., 1993).

Currently, more students fail the ninth-grade than any other grade (Editorial Projects in Education, 2006; Haney et al., 2004). Studies tracking student academic progress have found that between 70 and 80% of students who fail in the first year of high school will not graduate (Allensworth & Easton, 2005). A study of one large central city district suggested that as few as 23% of ninth graders entered high school with test scores at or above grade level in reading, and only 17% entered high school with test scores at or above grade level in math (Kemple, Herlihy, & Smith, 2005). Similarly, the 2007 National Assessment of Education Progress reports that 78% of students in large central cities fail to demonstrate proficiency in math and 80% fail to demonstrate proficiency in reading in the spring of their eighth-grade year (Lutkus, Grigg, & Donahue, 2007).

While the ninth-grade is where the majority of students struggle and ultimately leave school, the question remains, what if they had received intervention earlier, would they have been more successful?

## **Characteristics of Students That Leave School Prior to Graduation**

An examination of the most consistent characteristics of at risk students indicates clearly that students' who are poor, homeless, male, African American, or Hispanic, or in the sexual minority are far more likely to drop out of school (Herr, 1997; Rumberger, 1983, 1995a). While this information provides a broad view of the at risk student, there are additional aspects to consider in understanding students that are most likely to experience difficulty and leave school prior to graduation.

**Critical school years.** The middle school years are perhaps the most critical time in determining the potential success of students as numerous studies have demonstrated that grades, academic achievement, perceptions of ability, educational expectations and educational values have all been found to decline during the middle school years (Eccles, Lord, Roeser, Barber, & Jozefowicz, 1997). Not surprisingly, grade retention, special education verification, alternative school placement, tracking, absences, suspensions, and dislike for school increase during this same time frame (Eccles et al., 1997; Mendez & Knoff, 2003; Wolman, Buininks, & Thurlow, 1989). Based on this evidence, it is imperative that elementary schools work with middle schools to develop strategies that will allow educators to identify students that are at risk as early as possible in their educational experience and further provide transition support strategies.

**Ethnicity data.** According to recent projections, within the next few decades, African Americans, Latinos, and Asian Americans likely will represent more than half of the United States population (Wasow, 2005). With that thought in mind, it is particularly troubling that a large number of African American and Latino students are failing to find success in school. Evidence of this fact, can be found in a recent study of the Chicago

school system, where researchers determined that district graduation rates differed vastly by ethnic group with 39% of African American students graduating, in comparison to 51% of Hispanic students, 71% of Caucasian students, and 85% of Asian students (Allensworth, 2005).

**Family data.** Research has shown that students that come from single-parent families, have parents that have been divorced or remarried (Jozefowicz, 2003), and reside in foster care (Blome, 1997), are at a higher risk for dropping out of school. This increased risk also exists for students who have family members that have dropped out, if the family places a low value on education, or if there are cultural or language barriers that exist between the family and the school (Dupper, 1993; Jozefowicz, 2003). Finally, students who reside in homes where the parents are more punitive or less involved in their children's lives also have a greater likelihood of performing poorly in school and ultimately dropping out (Jozefowicz, Colarossi, Arbretton, Eccles, & Barber, 2000; McLoyd, 1990).

**Socioeconomic factors.** Not surprisingly, there is a strong relationship between family socioeconomic factors and leaving school prior to graduation. Income level, parent's level of education, parent's employment status, and parent's occupation can each contribute a student's decision to drop out of school (Cairns, Neckerman, & Cairns, 1989; Dryfoos, 1990; Rumberger, 1983). When a family has limited resources for basic needs such as food, clothing, and consistent housing, many students develop feelings of anxiety that are directly related to the financial difficulties that the family is experiencing. This additional stress can detract from a student's ability to focus on and feel comfortable attending school (Hernandez Jozefowicz-Simbeni, 2008).

## **Reasons for Student Failure**

The term that best defines the tipping point which leads students to leave school early is disengagement. Clearly, when students become disengaged in school, their odds of achieving success diminish greatly. Researchers have identified particular student characteristics that demonstrate disengagement from school and those include: multiple unexcused absences from school, minimal involvement in extra-curricular activities, and involvement in negative social interactions with both peers and school staff (Croninger & Lee, 2001; Finn, 1993; Phelan, 1987; Thompson-Hoffman & Hayward, 1990; Wagner, 1991). The disengagement process is progressive and the worst possible outcome is that a student may drop out of school (Finn, 1993; Wagner, 1991). One of the key factors that contribute to some students disengaging from the educational environment is a lack of academic success (Kemp, 2006). Additional factors include: absenteeism, retention, and family socio-economic status (Barrington & Hendricks, 1989; Ensminger & Slusarcick, 1992; Finn, 1989; Fitzsimmons, Cheever, Leonard, & Macunovich, 1969; Lloyd, 1974; Lloyd, 1978; Rumberger, 1995b). With more and more students each year who attend our public schools with personal variables that place them at risk, it is critical that teachers, administrators, parents, and policy makers work together to find ways to make school a meaningful and rewarding experience for all students.

## **Increasing Achievement for All Students**

Improving the academic achievement of K-12 students has been a central focus for educators in the United States since at least the early 1890's (Ravitch, 1983). With this goal in mind, there have been a number of attempts to develop educational innovations that would enhance student achievement (Wormeli, 2006). Examples of

some of these innovations include: changing the student schedule, decreasing class sizes, and increasing the use of technology. While all of these approaches have some degree of merit, the most important variable in the process of educating students remains the classroom teacher (Wormeli, 2006). Evidence to support this finding can be noted when you examine the results of a student spending an entire school year with the *most effective teacher* as compared to the *least effective teacher*. The most effective teacher produces a gain of 52%-ile points in student achievement, whereas the least effective teacher produces a gain of only 14%-ile points (Haycock, 1998). Furthermore, in a study of over 60,000 students, it was noted by Wright, Horn, and Sanders (1997), that the most important factor affecting student learning is the teacher. Given the profound impact that the teacher imparts on student achievement, it is critical that schools explore how to prepare teachers to be most effective.

### **Meaningful Professional Development for Teachers**

Teachers remain energized and excited about instruction when they are provided with training that allows them to continually improve and experience growth. While each school must determine which professional development model will work best for its staff, Hall and Simeral (2008) provide an excellent summary of the more effective approaches to providing quality professional development for teachers: lesson study--the teacher selects an appropriate standard, assesses the students' understanding, creates a plan to teach it effectively, and measures the results (Schmoker, 2006); collegial observations--the teacher spends a half-day observing colleagues with the building, either at the same grade level or in a common subject, and discusses the observations afterward, with either a coach or the teachers observed (DuFour & Eaker, 1998); peer coaching--a pair of

teachers alternate periods of observing each other and collecting data to share (Glatthorn, 1997); workshop/outside expert consultation--attending workshops that are provided by a reputable presenter can be tremendously motivating and informative (Allington & Cunningham, 2007); visitation--visit a neighboring school with similar characteristics, particularly those that have experienced success in the area in which your goal is set, so that great ideas can be observed in action (Hall, 2004); action research--like a lesson study for an entire unit, an action research plan isolates instructional focus points and returns information about their effectiveness (Sagor, 1991); modeled/demonstration lessons--utilize a teacher coach in your building to model lessons in a specific classroom (Moran, 2007); portfolio development--as a teacher attempts new strategies, implements new learning, and collects data, he or she can maintain a professional portfolio detailing these steps and the results, thus providing the evidentiary artifacts that support continued learning (Danielson & McGreal, 2000); diagnostic observation--the teacher coach observes the teacher for multiple class periods, seeking trends, strengths, and/or areas of need (Glatthorn, 1997); book study--reading a common professional text is a powerful learning tool for groups of teachers (Allington & Cunningham, 2007); literature review--teachers conduct their own research, review the findings, and discuss them or present a short summary to the staff explaining an instructional method they wish to try (Danielson & McGreal, 2000); reflective journaling--this approach encourages teacher reflection through writing (Brookfield, 1995); official collaborative time--when it is possible thorough district-wide scheduling or school wide planning, a meeting time on a regular basis can help to ensure that all team members are on the same page and are communicating with one another (DuFour & Eaker, 1998).



## **Shared Vision for Grading**

When one asks the question, “What is the purpose of Grading?” there is no shortage of responses. According to one source, the primary purpose of grading is to communicate student achievement to students, parents, school administrators, post-secondary institutions, and employers (Bailey & McTighe, 1996). Another source offers a slightly expanded definition when it states that purposes for grading include providing teachers with information for instructional planning and providing teachers, administrators, parents, and students with information for selection and placement of students (Brookhart, 2004). A final definition states that the primary purpose of grading is to communicate about achievement, with achievement being defined as performance measured against accepted published standards and learning outcomes (O’Connor, 2007).

Regardless of which definition you choose, the point to remember is that administrators and teachers in school districts and individual schools must have a shared vision for the purpose of grades within the context of all support strategies needed to change the life course of students at risk of failure to succeed.

## **Purpose of the Study**

The purpose of this study was to compare the achievement, engagement, and behavior outcomes of youth at risk following a pre-eighth-grade summer academic enrichment program and participation in a school-wide, school year long, ownership, mastery, and grading initiative.

## **Research Questions**

The following research questions were utilized to examine student achievement as measured by norm-referenced achievement Normal Curve Equivalent (NCE) scores for

reading, language, and math, end of eighth-grade core curriculum grades and cumulative grade point average, and end of eighth-grade Spring State Writing Assessment (SSWA) scores.

**Overarching Pretest-Posttest Achievement Research Question #1.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their pretest beginning of eighth-grade school year compared to posttest ending of eighth-grade school year norm-referenced California Achievement Test (a) reading vocabulary, (b) reading comprehension, and (c) total reading NCE scores?

**Sub-Question #1a.** Was there a statistically significant difference between at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative beginning eighth-grade compared to ending eighth-grade norm-referenced California Achievement Test (a) reading vocabulary, (b) reading comprehension, and (c) total reading NCE scores?

**Overarching Pretest-Posttest Achievement Research Question #2.** Did at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their pretest beginning of eighth-grade school year compared to posttest ending of eighth-grade school year norm-referenced California Achievement Test (a) reading vocabulary, (b) reading comprehension, and (c) total reading NCE scores?

**Sub-Question #2a.** Was there a statistically significant difference between at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative beginning eighth-grade compared to ending eighth-grade norm-referenced California Achievement Test (a) reading vocabulary, (b) reading comprehension, and (c) total reading NCE scores?

**Overarching Posttest-Posttest Achievement Research Question #3.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative compared to at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative have congruent or different posttest ending of eighth-grade school year norm-referenced California Achievement Test (a) reading vocabulary, (b) reading comprehension, and (c) total reading NCE scores?

**Sub-Question #3a.** Was there a statistically significant difference between at risk students who completed and at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ending eighth-grade compared to ending eighth-grade norm-referenced California Achievement Test (a) reading vocabulary, (b) reading comprehension, and (c) total reading NCE scores?

**Overarching Pretest-Posttest Achievement Research Question #4.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading

initiative lose, maintain, or improve their pretest beginning of eighth-grade school year compared to posttest ending of eighth-grade school year norm-referenced California Achievement Test (a) language mechanics, (b) language expression, and (c) language total normal curve equivalent NCE scores?

**Sub-Question #4a.** Was there a statistically significant difference between at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative beginning eighth-grade compared to ending eighth-grade norm-referenced California Achievement Test (a) language mechanics, (b) language expression, and (c) language total normal curve equivalent NCE scores?

**Overarching Pretest-Posttest Achievement Research Question #5.** Did at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their pretest beginning of eighth-grade school year compared to posttest ending of eighth-grade school year norm-referenced California Achievement Test (a) language mechanics, (b) language expression, and (c) language total normal curve equivalent NCE scores?

**Sub-Question #5a.** Was there a statistically significant difference between at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative beginning eighth-grade compared to ending eighth-grade norm-referenced California Achievement Test (a) language mechanics, (b) language expression, and (c) language total normal curve equivalent NCE scores?

**Overarching Posttest-Posttest Achievement Research Question #6.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative compared to at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative have congruent or different posttest ending of eighth-grade school year norm-referenced California Achievement Test (a) language mechanics, (b) language expression, and (c) language total normal curve equivalent NCE scores?

**Sub-Question #6a.** Was there a statistically significant difference between at risk students who completed and at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ending eighth-grade compared to ending eighth-grade norm-referenced California Achievement Test (a) language mechanics, (b) language expression, and (c) language total normal curve equivalent NCE scores?

**Overarching Pretest-Posttest Achievement Research Question #7.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their pretest beginning of eighth-grade school year compared to posttest ending of eighth-grade school year norm-referenced California Achievement Test (a) math computation, (b) math concepts and applications, (c) math total normal curve equivalent NCE scores?

**Sub-Question #7a.** Was there a statistically significant difference between at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative beginning eighth-grade compared to ending eighth-grade norm-referenced California Achievement Test (a) math computation, (b) math concepts and applications, (c) math total normal curve equivalent NCE scores?

**Overarching Pretest-Posttest Achievement Research Question #8.** Did at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their pretest beginning of eighth-grade school year compared to posttest ending of eighth-grade school year norm-referenced California Achievement Test (a) math computation, (b) math concepts and applications, (c) math total normal curve equivalent NCE scores?

**Sub-Question #8a.** Was there a statistically significant difference between at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative beginning eighth-grade compared to ending eighth-grade norm-referenced California Achievement Test (a) math computation, (b) math concepts and applications, (c) math total normal curve equivalent NCE scores?

**Overarching Posttest-Posttest Achievement Research Question #9.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative compared to at risk students who refused a pre-eighth-grade summer academic

enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative have congruent or different posttest ending of eighth-grade school year norm-referenced California Achievement Test (a) math computation, (b) math concepts and applications, (c) math total normal curve equivalent NCE scores?

**Sub-Question #9a.** Was there a statistically significant difference between at risk students who completed and at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ending eighth-grade compared to ending eighth-grade norm-referenced California Achievement Test (a) math computation, (b) math concepts and applications, (c) math total normal curve equivalent NCE scores?

**Overarching Pretest-Posttest Achievement Research Question #10.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their classroom performance as measured by the research school district's ending of seventh-grade school year core curriculum grades (grade point average) compared to ending of eighth-grade school year core curriculum grades (grade point average) for: (a) reading; (b) language arts; (c) mathematics; (d) science; (e) social studies grade scores; and (f) cumulative grade point average?

**Sub-Question #10a.** Was there a statistically significant difference between at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative end of the seventh-grade school core curriculum grades (grade point average) compared to end of eighth-grade school core curriculum grades (grade point

average) for: (a) reading; (b) language arts; (c) mathematics; (d) science; (e) social studies grade scores; and (f) cumulative grade point average?

**Overarching Pretest-Posttest Achievement Research Question #11.** Did at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their classroom performance as measured by the research school district's ending of seventh-grade school year core curriculum grades (grade point average) compared to ending of eighth-grade school year core curriculum grades (grade point average) for: (a) reading; (b) language arts; (c) mathematics; (d) science; (e) social studies grade scores; and (f) cumulative grade point average?

**Sub-Question #11a.** Was there a statistically significant difference between at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative end of the seventh-grade school core curriculum grades (grade point average) compared to end of eighth-grade school core curriculum grades (grade point average) for: (a) reading; (b) language arts; (c) mathematics; (d) science; (e) social studies grade scores; and (f) cumulative grade point average?

**Overarching Posttest-Posttest Achievement Research Question #12.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative compared to at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative have congruent or different classroom performance as



measured by the research school district's ending of the eighth-grade school year core curriculum grades (grade point average) for: (a) reading; (b) language arts; (c) mathematics; (d) science; (e) social studies grade scores; and (f) cumulative grade point average?

**Sub-Question #12a.** Was there a statistically significant difference between at risk students who completed and students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ending eighth-grade compared to ending eighth-grade classroom performance as measured by core curriculum grades (grade point average) for: (a) reading; (b) language arts; (c) mathematics; (d) science; (e) social studies grade scores; and (f) cumulative grade point average?

**Overarching Pretest-Posttest Achievement Research Question #13.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their writing performance as measured by the research school's beginning eighth-grade Fall Building Writing Assessment (FBWA) scores compared to ending eighth-grade Spring State Writing Assessment (SSWA) scores?

**Sub-Question #13a.** Was there a statistically significant difference between at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative beginning eighth-grade FBWA scores compared to ending eighth-grade SSWA scores?

**Overarching Pretest-Posttest Achievement Research Question #14.** Did at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their writing performance as measured by the research school's beginning eighth-grade FBWA scores compared to ending eighth-grade SSWA scores?

**Sub-Question #14a.** Was there a statistically significant difference between at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative beginning eighth-grade FBWA scores compared to ending eighth-grade SSWA scores?

**Overarching Posttest-Posttest Achievement Research Question #15.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative compared to at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative have congruent or different writing performance as measured by the research school district's ending eighth-grade SSWA scores?

**Sub-Question #15a.** Was there a statistically significant difference between at risk students who completed and at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ending eighth-grade compared to ending eighth-grade SSWA scores?

The following research question was used to examine school engagement as measured by cumulative participation frequencies for athletics and activities combined.

**Overarching Posttest-Posttest School Engagement Research Question #16.**

Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative compared to at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative have congruent or different school engagement as measured by ending of eighth-grade school year cumulative participation frequencies for athletics and activities combined?

**Sub-Question #16a.** Was there a statistically significant difference between at risk students who completed and students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ending of eighth-grade school year cumulative participation frequencies compared to ending of eighth-grade school year cumulative participation frequencies for athletics and activities combined?

The following research questions were utilized to examine student behavior as measured by cumulative frequencies for absences, tardies, and discipline referrals.

**Overarching Pretest-Posttest Behavior Research Question #17.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their behavior as measured by the ending of seventh-grade school year cumulative behavior frequencies compared to ending of eighth-grade

school year cumulative behavior frequencies for absences, tardies, and discipline referrals?

**Sub-Question #17a.** Was there a statistically significant difference between at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ending of seventh-grade cumulative behavior frequencies compared to ending of eighth-grade cumulative behavior frequencies for absences, tardies, and discipline referrals?

**Overarching Pretest-Posttest Behavior Research Question #18.** Did at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their behavior as measured by the ending of seventh-grade school year cumulative behavior frequencies compared to ending of eighth-grade school year cumulative behavior frequencies for absences, tardies, and discipline referrals?

**Sub-Question #18a.** Was there a statistically significant difference between at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ending of seventh-grade cumulative behavior frequencies compared to ending of eighth-grade cumulative behavior frequencies for absences, tardies, and discipline referrals?

**Overarching Posttest-Posttest Behavior Research Question #19.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and

participated in a school-wide, school year long, ownership, mastery, and grading initiative compared to at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative have congruent or different behavior as measured by ending of eighth-grade school year cumulative behavior frequencies for absences, tardies, and discipline referrals?

**Sub-Question #19a.** Was there a statistically significant difference between at risk students who completed and students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ending eighth-grade compared to ending eighth-grade cumulative behavior frequencies for absences, tardies, and discipline referrals?

### **Importance of the Study**

This study provides insight into strategies and approaches that can be utilized by all educators they work with ever increasing numbers of at risk students. By identifying ways to improve student achievement, facilitate student engagement, and amplify students' sense of ownership of their learning, educators can create the type of learning environments that cultivate optimal learning and opportunities for success for all students. In an era of intense scrutiny by stakeholders within and outside of the education community, it is critical that all educators are seeking information related to and utilizing best practices for teaching and learning.

### **Assumptions of the Study**

This study possesses several strong features. All teachers at the research school have received extensive professional development in the area of best practices for instruction. Specifically, teachers have participated in workshops focused on research-proven, most effective teaching strategies (Marzano, Pickering, & Pollack, 2001); proven literacy strategies (Billmeyer, 2003); and strategies for managing student behavior and enhancing instructional time (Smith, 2004). Furthermore, teachers intensively explored the theoretical and practical implementation of differentiated instruction (Kaufeldt, 2005); strategies for utilizing higher-level questioning with students (Kennedy, 2009); best practices related to grading, assessment, and homework (Guskey & Bailey, 2001; Marzano, 2006; O'Connor, 2009; Vatterott, 2009; Wormeli, 2006); and standards-based education (Reeves, 2002). Furthermore, the four teachers that were selected to provide instruction during the pre-eighth-grade summer academic enrichment program were all recognized as highly effective teachers in their respective content areas. All administrators and teachers in the research school participated in the process of developing, implementing, and refining school-wide, school year long, ownership, mastery, and grading initiative activities meant to provide students with an enhanced level of consistency, accuracy, and understanding of grading practices and how to be successful in the classroom. Finally, the pre-eighth-grade summer academic enrichment program and the school-wide, school year long, ownership, mastery, and grading initiative was approved and supported by the research school faculty and administration.

### **Delimitations of the Study**

The study is delimited to the eighth-grade students of one magnet middle school in an urban school district who were in attendance from the fall of 2007 to the spring of 2009. Students must have completed all assessments that took place during the 2007-2008 and 2008-2009 school years. Data related to achievement, school engagement, and behavior was collected routinely throughout both school years included in the study. Study findings were limited to students who received an invitation to attend a pre-eighth-grade summer academic enrichment program.

### **Limitations of the Study**

This sample for this study was confined to eighth-grade students ( $N = 40$ ) who did or did not attend an invitational pre-eighth-grade summer academic enrichment program and who also participated in a school-wide, school year long, ownership, mastery, and grading initiative during their eighth-grade year of schooling. The limited sample size and possibility that the research school may make future revisions to current grading practices may limit the utility and generalizability of the study results and findings.

### **Definition of Terms**

**Achievement.** Achievement is defined as the level of accomplishment that a student demonstrates through the completion of school related tasks and activities.

**Assessment.** Assessment is defined as a process of collecting data for the purposes of making decisions about individuals and groups.

**At Risk students.** At Risk students are defined as students who are at risk of failing to experience success at school, and therefore complete high school, for various reasons. The term can be used to describe a wide variety of students, including: ethnic

minorities, academically disadvantaged students, disabled students, and students from low socioeconomic status.

**Attendance.** Attendance is defined as the frequency with which a student is present in school. In this study attendance was counted on a per student basis utilizing the SASI database.

**Behavior.** Behavior is defined as attendance, tardies to class, and discipline referral frequency for each study participant. These three behavioral dependent measures are a direct result of participants' behavior and are uniformly collected and recorded by school personnel and available in the SASI database.

**Buffett Grading Policy (BGP).** The Buffett Grading Policy is defined as the school-wide grading practices that were utilized at Alice Buffett Magnet Middle School, Omaha, NE, during the 2007-2008 and 2008-2009 school years.

**Fall Building Writing Assessment (FBWA).** The Fall Building Writing Assessment is an assessment that is administered to all eighth-grade students in the fall of their eighth-grade grade year of schooling. The writing prompt for the FBWA is presented in the same format as the prompt for the Spring State Writing Assessment (SSWA) and is scored by district personnel using the same rubric and scoring system that is used to evaluate the SSWA.

**California Achievement Test, Fifth Edition (CAT/5).** The CAT measures achievement in reading, language, spelling, mathematics, study skills, science, and social studies. The CAT is a traditional standardized, norm referenced assessment series that provides comprehensive evaluation of student achievement.



**Criterion-referenced.** Criterion-referenced is defined as using standards, objectives, or benchmarks as the reference points for determining students' achievement (Wormeli, 2006).

**Descriptive Feedback.** Descriptive feedback is defined as feedback that describes to a student what they are demonstrating and what they need to demonstrate to achieve defined learning objectives.

**Differentiated instruction (DI).** Differentiated instruction is defined as a systematic approach to engage learners of all types in the areas of learner readiness, interest and learner profile by using data supported strategies and tiered instructional techniques (Tomlinson, 2003).

**District middle level initiative.** The district middle level initiative reflects the research school district's commitment to improve achievement scores at the middle level. The initiatives addressed reading and writing issues with research based strategies for engaging students in activities that improve achievement. Such strategies included, but were not limited to, reciprocal teaching, word walls, graphic organizers, and combination note taking.

**Engagement.** Engagement is defined as students being focused on and actively participating in learning and assessment experiences.

**Evaluate.** To evaluate is to judge the worthiness of something, or how a performance, product or idea compares to standards or criteria set for it (Wormeli, 2006).

**Feedback.** Feedback is defined as telling students what they did, without evaluating, and helping them compare what they did with what they were supposed to do (Wormeli, 2006).

**Formative Assessment.** Formative assessment is defined as frequent and ongoing assessment, completed en route to mastery (Wormeli, 2006).

**Grading.** Grading is defined as a process that teachers employ to document student and teacher progress, to provide feedback to students, parents and teachers and to inform instructional decisions (Wormeli, 2006).

**Grade level equivalent (GLE).** Grade level equivalent is defined as the grade level in years and months that NRT scores reflect.

**Grade point average (GPA).** Grade point average is defined as the average on a scale of 4.0 of the grades received by a student throughout a school year based on the SASI database.

**Language Expression Subtest.** The language expression subtest is defined as the CAT subtest that measures a student's ability to identify appropriate parts of speech, effective sentence formation and combinations, and effective paragraph structure and coherence in a selected response testing format.

**Language Mechanics Subtest.** The language mechanics subtest is defined as the CAT subtest that measures a student's ability to identify the appropriate use of capitalization and punctuation in a selected response testing format.

**Mastery.** Mastery is defined as students ability to explain a topic, interpret it for others or other situations, apply it, acknowledge and explore alternative perspectives on the topic, experience empathy for the topic and accurately identify and reflect on their own self-knowledge regarding the topic (McTighe & Wiggins, 2001).

**Non-proficient.** Non-proficient is defined as when a student cannot produce the designated quality of work to demonstrate mastery of a particular standard for a particular

subject matter. In this study students were determined to be non-proficient if they were two levels below grade on the three CAT reading measures.

**Normal curve equivalent (NCE).** Normal curve equivalent is defined as standard scores with a mean equal to 50 and a standard deviation equal to 21.06. Running from 1 to 99, the numbers on the NCE line indicate how many students out of a hundred had a lower score. NCE scores are often used to compare standardized test performance over a period of years (Salvia & Ysseldyke, 2004).

**Norm-referenced test (NRT).** Norm-referenced tests are defined as tests that measure and compare an individual's performance to the performance of a similar group of students who have taken the same test. The NRT used in this study was the California Achievement Test.

**Office Referral.** An office referral is defined as a document written by a staff member that explains the facts about student misbehavior. This legal document signifies the need for administrative intervention according to student handbook guidelines. Examples of behavior that would result in an office referral include disrespect to staff, physical aggression, and extreme disruption of the learning environment.

**Ownership.** Ownership is defined as having control over the learning environment, connecting with and personalizing the learning process, expressing territoriality, and being involved or invested in one's learning (Killeen, Evans, & Danko, 2003).

**Performance assessment.** Performance assessment is defined as a type of assessment that requires students to perform a task instead of selecting an answer from a

provided list. Examples include giving a speech, completing a math problem, or writing an original essay (Office of Research in Education Consumer Guide, 1993).

**Pre-assessment.** Pre-assessment is defined as any kind of assessment completed prior to teaching a lesson that is used to inform instructional decisions (Wormeli, 2006).

**Pre-eighth-grade summer academic enrichment program.** The pre-eighth-grade summer academic enrichment program is a six week summer program that is focused on students who are not performing at grade level in the academic areas of reading, writing, and mathematics. Students are identified based on their assessment results and grades earned during the school year and then invited to participate in the program. Participation is not required, but is strongly encouraged.

**Proficiency.** Proficiency is defined as the designated quality of work a student must produce to demonstrate mastery of a particular standard.

**Reading comprehension.** Reading comprehension is defined as understanding a text that is read, or the process of constructing meaning from a text.

**Reading vocabulary.** Reading vocabulary is defined as the ability to derive meaning for words found in a text based on prior knowledge, using context clues, or word roots and derivatives.

**Rubric.** A rubric is defined as a scoring tool for subjective assessments. It is a set of criteria and standards linked to learning objectives that is used to assess a student's performance on papers, projects, essays, and other assignments. Rubrics allow for standardized evaluation according to specified criteria, making grading simpler and more transparent.

**School-wide.** School-wide is defined as an initiative, strategy, or approach that is uniformly implemented by all staff members to meet the needs of all students.

**School year long.** School year long is defined as an initiative, strategy, or approach that is consistently utilized by all staff members for the length of the entire school year.

**School Administrators Student Information (SASI).** School Administrators Student Information is defined as the information data base of the research school's district.

**Spring State Writing Assessment (SSWA).** The Spring State Writing Assessment is a state administered assessment of students' writing skills that is given to students in the spring of their third-grade, eighth-grade, and eleventh-grade years of schooling. The SSWA is scored at the state level by selected educators from across the state of Nebraska, using the same rubric and scoring system.

**Standards Movement.** Standards movement is defined as the drive by states and school districts to create a common set of standards that clearly state for students, teachers, and parents what students should know and be able to do at various levels of schooling (Thompson, 2001).

**Strategy.** A strategy is defined as a tool, plan, or method used for accomplishing a task.

**Summative assessment.** Summative assessment is defined as assessment completed after the learning experiences which require students to demonstrate their level of mastery (Wormeli, 2006).

**Significance of the Study**

This study provides valuable research related to supporting and meeting the unique social, emotional, and academic needs of students that are at risk of failing in school. Due to the fact that we are encountering increasing numbers of at risk students in our schools, these research results are especially significant as educators seek ways to enhance and improve achievement for all students.

**Contribution to Research**

While there have been numerous studies that have focused on identifying the characteristics of at risk students, there are a limited number that offer conclusions related to how to most effectively address the challenges that at risk students face. Similarly, while there is significant literature related to best practices in grading, there are limited examples of how effective grading practices can not only enhance achievement, but also create a greater sense of ownership of their own learning among students. The results of this study inform the theoretical and practical literature on the effectiveness of the practices and strategies used.

**Contribution to Practice**

This study provides insight that will assist educators in addressing the needs of students that have been determined to be at risk. By examining the effectiveness of offering an academic enrichment program that is paired with a school-wide, school year long, ownership, mastery, and grading initiative, educators may be able to identify the specific assessment and instructional strategies that are most effective. Based on the outcomes of this study, the school and district may decide whether to continue the practices and also consider expanding these practices into other district middle schools.

### **Contribution to Policy**

Until there is a meaningful commitment to consistently implementing the use of best practices in education, we will continue to fall short of meeting the needs of all students. Even at a time when education is facing significant funding challenges, school districts must prioritize the investment of fiscal resources into the type of professional development that will allow administrators and teachers to provide a high quality educational experience. Local level policy will be impacted by this study as schools attempt to meet the accountability standards that have been put in place at the state and federal level. If the results indicate an increase in student achievement, ownership and mastery, a discussion should be generated to consider district-wide implementation.

### **Organization of the Study**

The literature review relevant to this study is presented in Chapter 2. Chapter 3 describes the research design, methodology, and procedures that were used to gather and analyze the data of the study. This includes a detailed synthesis of the participants, a comprehensive list of the dependent variables, dependent measures, and the data analysis that was used to statistically determine if the null hypothesis shall be rejected for each research question. Chapter 4 reports the research results and findings--including data analysis, tables, and descriptive statistics. Chapter 5 provides conclusions and a discussion of the research findings.

## CHAPTER TWO

### Review of the Literature

#### A Review of Selected Literature and Research

Keeping at risk students in school until graduation has been a main concern for schools, communities, states, and the federal government since the 1970s when large cities across the country began seeing the number of dropouts rise (Alexander, Entwisle, & Kabbani, 2001; Suh & Suh, 2007). National legislation such as, No Child Left Behind (2001) and Improving America's Schools Act (1994) have brought to light the importance of focusing extra attention, earlier rather than later, on children who have any type of disadvantage that might hinder them in their education (Picucci, Brownson, Kahlert, & Sobel, 2004). No longer is it acceptable for schools to wait until students enter high school to address the academic, social, emotional, and behavioral needs of at risk students. At risk students have special needs that must be met for them to be successful in school (Sullivan & Bishop, 2005).

#### Student At Risk Prevention

There is a growing body of evidence that indicates that school failure can be avoided. Through a combination of early childhood interventions and research-proven programs at the primary grade levels, educators can effectively provide students with the critical skills and knowledge they will need to achieve success in school (Slavin, Karweit, & Wasik, 1992).

**Birth to age three.** When working with at risk children during the early stages of life, interventions that are focused on the child and the family can result in a significant and long-term difference in IQ score (Wasik & Karweit, in press). One program that



produced some of the longest lasting effects was the Milwaukee Project (Garber, 1988). The Milwaukee Project exposed infants to 35 hours per week of stimulation that included one-on-one interaction with trained caregivers, followed by a quality pre-school experience. This program also provided parent training and vocational skills training. As a result of their involvement in the Milwaukee Project, by the age of 10, the children had IQs that were comparable to those of low-risk students and their IQs were significantly higher when compared to a randomly selected group of at risk students. Another program that produced substantial gains for children was the Gordon Parent Education Program. This program provided parents from low-income backgrounds with intense training on child stimulation and as a result of their participation; the children had higher IQ scores when compared to other at risk students and also had a much lower number of placements in special education (Jester & Guinagh, 1983).

**Pre-school.** Participation in a quality pre-school program can also benefit children's IQ and language proficiency, but the gains do not typically last beyond the early years of elementary school (Karweit, in press a; McKey et al., 1985). Despite these results related to long-term learning gains, children who attend a quality pre-school do experience benefits such as being less likely to be retained and/or placed in special education (Slavin et al., 1992). This is significant because retention and special education placement during the elementary school years has a strong relationship to eventually dropping out of high school (Lloyd, 1978).

**Kindergarten.** Since Kindergarten represents the introduction of formal schooling to children, it makes sense that this would be a critical experience in the educational journey of our students. Therefore, the question becomes, *What are the key*

*factors that contribute to a meaningful kindergarten experience?* More than ever, educators are at odds over what the kindergarten experience should look like and some believe that we have begun to emphasize learning outcomes more than the developmental factors that make kindergarten an inviting environment for students to start school (Graue, 2011). While there may be an increased effort to teach to specific learning outcomes during kindergarten, the few studies that have been completed failed to demonstrate that kindergarten learning results in any long-term students' gains, beyond those that are measured at the end of the kindergarten experience (Karweit, in press b). This evidence is not meant to infer that the learning that takes place during kindergarten is not important, rather, that it must be balanced with a nurturing environment that is supportive and welcoming to students. Furthermore, educators should strive to create a kindergarten experience that includes the assessment of all aspects of social, emotional, and cognitive development (Graue, 2011).

**Transition to elementary school.** According to some educators, *everything changes* for students during their early years of schooling (Ladd, 1996). If this is true, all educators need to invest time learning about the developmental needs of elementary aged students so that we can insure that our schools are ready for students, rather than trying to make children ready for schools (Stipek, 2002). Some specific strategies that can assist teachers in the early months of school include: developing positive relationships, using constructivist management practices, and creating rich learning environments (Daniels, 2011). One example of how a teacher can build positive relationships is through deliberately setting aside time for individual conversations with students about their interests or planning small group activities focused on students having positive

interactions with teachers (Pianta, 1999). An example of constructivist management would be assigning students specific roles or tasks to complete and involving students in the creation of classroom rules (Stipek & Byler, 2004). Finally, creating a rich learning environment which incorporates learning activities that challenge students' thinking in a variety of ways can enhance students' attitudes and enjoyment of school and assist children in developing essential competencies during their transition from early to middle childhood (Daniels & Clarkson, 2010).

**Importance of reading during the early grades.** Slavin, Karweit, and Wasik (1992), assert that the consequences of failing to learn to read in the early grades are severe. Longitudinal studies have shown that at risk third-grade students who have failed one or more grades and are reading below grade level are very unlikely to complete high school (Kelly, Veldman, & McGuire, 1964; Lloyd, 1978). These findings underscore the critical importance of students acquiring and experiencing success with reading at an early age. One of the most helpful and effective strategies for preventing early reading failure is one-to-one tutoring of at risk first-graders. A model that produced significant success by incorporating this strategy was Reading Recovery, which combines direct teaching of metacognitive strategies, learning to read by reading, phonics instruction in the context of students' reading, and the incorporation of reading and writing (Slavin et al., 1992). Follow up studies of this model provided evidence that students' maintained their positive growth into their second and third-grade years of schooling. Another highly successful program for supporting the needs of elementary age students is Success for All. Success for All is unique in that it provides at risk students with support strategies and exposure to research-based curriculum and instructional methods from pre-

school through fifth-grade (Madden, Slavin, Karweit, Dolan, & Wasik, 1991). Research on Success for All demonstrates significantly positive effects on the reading performance of all students in grades one through three and a decrease in retentions and special education placements (Slavin et al., 1992).

**Transition to middle school.** For many students, the first year of middle school is intense, filled with anxiety, and each day is the beginning or end of life as they know it (Wormeli, 2011). There is significant evidence that indicates that the middle school experience can have a direct correlation to graduation rates, especially in areas of high poverty (Balfanz, 2009). Fortunately, similar to the elementary experience, successful transitions to middle school can be enhanced by focusing on the specific needs of students at this age level. Wormeli (2011) posits five key strategies for fostering a successful transition to middle school. These are (a) understanding students' concerns about belonging, (b) empathizing with students, (c) understanding the characteristics of the age group, (d) focusing on the positive, and (e) building hope. The first three strategies are closely connected and reinforce the premise that educators must recognize the myriad of personal changes, and challenges, that students experience during this time of their lives--both real and perceived. The fourth and fifth strategies, focusing on the positive and building hope, are also related and can be of critical importance to students that come to our schools with risk factors such as economic and home challenges. Trying to remediate failure after the initial years of schooling is extremely difficult because students who have experienced failures early in school often become less motivated and develop low opinions of themselves as learners (Slavin et al., 1992). One remedy to address the needs of students who have struggled in school is to provide the academic

and more importantly, the emotional support and encouragement that will allow these students to believe that they can be successful in school. If educators can find ways to focus on the talents and positive contributions of their students, the students are much more likely to remain engaged and productive learners (Buckingham & Clifton, 2001).

### **Effective Grading Practices for Students At Risk**

The intended purpose of grading is to document student and teacher progress, to provide feedback to the student, family, and teacher and to inform instructional decisions by the teacher (Wormeli, 2006). Unfortunately, many at risk students and their parents have come to view grades as a means of punishing and sorting students. This belief is an outgrowth of a long history of educators, parents, and students viewing grades as a measure of student ability, rather than student achievement related to a particular learning activity or course (Collopy & Green, 1995). In order to effectively meet the needs of all students, grading practices must be designed and shared in a way that fosters understanding among and between all stakeholders.

**Formative assessment.** Formative assessment is defined as frequent and ongoing assessment, completed en route to mastery (Wormeli, 2006). According to Brookhart, Moss, and Long (2008), because of the sharing of information and the communication that occurs between the teacher and the student, formative assessment creates a greater sense of student ownership of learning than any other classroom-based practice a teacher can employ. Implemented effectively, formative assessment incorporates descriptive feedback for students, provides guidance that encourages students' beliefs in their abilities, and raises the level and quality of classroom discussions. Finally, formative

assessment allows teachers to accurately evaluate the quality and effectiveness of their instructional approaches (Brookhart, Moss, & Long, 2008).

**Descriptive feedback.** The most powerful single modification that enhances achievement is descriptive feedback (Hattie, 1992). In a series of research studies, Hattie (1992), provided evidence that regular use of descriptive feedback can produce a 20%-ile gain in student achievement, whereas, simply telling students if their answer is right or wrong, actually decreases student achievement by 3%-ile points. These findings illustrate the importance of teachers' taking the time to give students specific feedback that is tied to the learning objective. To be meaningful, descriptive feedback must describe students' work and the processes that were used to complete the work, making certain that students clearly understand the connection (Brookhart et al., 2008).

**Rubrics.** One of the most straight-forward and effective ways to make grading and performance targets transparent for students is through the use of rubrics. A rubric is defined as a one to two page document that illustrates levels of quality for a specific learning activity and the criteria required to achieve each level of quality (Andrade, 2000). According to Stiggins, Arter, Chappuis, and Chappuis, (2004), the criteria used to evaluate the quality of a rubric are (a) content (Does it assess the important material?), (b) clarity (Can the student understand what is being asked of him or her?), (c) practicality (Is it easy to use by both teachers and students?), and (d) technical quality/fairness (Is it reliable and valid?). When designed and used independently by students to evaluate their own work, rubrics provide students with more informative feedback about their strengths and areas in need of improvement than other forms of assessment (Andrade, 2000).

**Grading practices must accurately reflect achievement.** When additional factors, other than mastery, are included as components of a student's grade, the grade can no longer be used accurately to document mastery, provide feedback, or guide instruction (Wormeli, 2006). To insure that grades are an accurate reflection of student achievement, certain practices should be avoided so that grades don't provide a distorted representation of achievement. According to O'Connor (2007), the practices to avoid are as follows: (a) don't include student behaviors such as effort, participation, and following classroom rules, (b) don't reduce grades because work was submitted late--instead provide support for the learner, (c) don't use bonus points or extra credit, (d) don't punish academic dishonesty by lowering grades--apply other consequences, such as redoing the assignment with teacher or parent supervision and reassess the student's level of achievement, and (e) don't consider attendance in grade determination--report absences separately. Adherence to these principles will insure that student grades remain a reflection of student learning and achievement.

### **Student At Risk Engagement**

**Student involvement in extra-curricular activities.** Involvement in extra-curricular activities such as athletics and clubs can greatly enhance the level of school engagement among at risk students (Holloway, 1999). In fact, one study indicated that engagement in school extracurricular activities was linked to decreasing rates of early school dropouts in both male and female students (Mahoney & Cairns, 1997). Mahoney and Cairns (1997), go on to report that, unlike dropout prevention programs that focus on the deficiencies of at risk students and sometimes contribute to the formation of negative peer groups, extracurricular activities support at risk students by amplifying the student to

school connection. In another study, McNeal (1995) demonstrated that student participation in athletics reduced the likelihood of those students dropping out of school by 40%. Similarly, students involved in soccer demonstrated significantly higher GPAs during the season as opposed to during the off-season, providing valuable evidence that involvement in athletics may enhance, not reduce, academic performance (Silliker & Quirk, 1997).

**Effective after school programs.** According to Holloway (2002), there are a variety of reasons why involvement in after school programs and extracurricular activities lead to increased levels of motivation and engagement among students. Among the reasons that Holloway (2002), cites are (a) extracurricular activities appeal to student interests, (b) extracurricular activities encourage positive peer interactions and cooperation, and (c) extracurricular activities build student-staff relationships, while also providing structure and challenges for students. Additional evidence to support Holloway's position can be found in a study that indicated that students from low-income backgrounds found value in after school programs because they provided similar opportunities (dance, music, art) that middle class students had access to (Posner & Vandell, 1999). Finally, in a study of Mexican American students, those involved in extracurricular activities and after school programs were far more likely to remain in school than their inactive peers (Davalos, Chavez, & Guardiola, 1999).

**Service learning.** Service learning has become a fixture in schools across the country during the past 15 years. Gomez (1999) provides a definition of service learning, stating that:



It helps students learn and develop by participating in thoughtfully organized service that is conducted in and meets the needs of the community, is coordinated with an elementary or secondary school, college or university, community service program, and with the community, helps foster civic responsibility, is integrated into and enhances students' academic curriculum or the education components of the community service program in which the participants are enrolled, and provides structured time for students or other participants to reflect on the service experience. (p. 1)

Furthermore, there is continuing broad support for service learning among policy makers and educators because, "Service learning offers teachers an opportunity to implement educational reform strategies that emphasize student-centered contextual learning--learning that occurs through students' interpretative interactions in the social environment in which their knowledge is to be applied" (Brown, 1998; p. 2). Service learning is an effective tool for increasing student engagement because it provides students with opportunities to learn new skills, apply the knowledge they have acquired, and take ownership in the planning of service learning projects (Ernst, Amis, & Carter, 1999).

### **Student At Risk Mastery and Success**

According to Engelmann (1999), "School failure for at risk students results largely from the fact that all children are expected to learn a specified battery of skills in so many years. This race is unfair for at risk children because they have further to go in the specified time" (p. 77). This opening statement outlines one of the primary challenges facing students that come to school from disadvantaged backgrounds. On a

related note, there is significant research to indicate that poor school attendance is highly correlated with failure in school, specifically, the failure of a student to learn to read (Hodgkinson, 1992). If we are to assist at risk students in achieving success at school, we must find ways for those students to regularly experience success and ultimately, mastery.

**Clear learning targets.** If students are to achieve mastery and experience success in school, then they must have a clear idea of what they are supposed to be learning (Moss, Brookhart, & Long, 2011). A properly designed and communicated learning target defines the amount of learning and specifies the particular content we want students to master (Leahy, Lyon, Thompson, & Wiliam, 2005). Without this clear direction, students are placed in a position of simply doing what the teacher tells them to do, as opposed to participating in the lesson as motivated, self-managed, and intentional learners (Zimmerman, 2001). Even more precarious, is the possibility that students who do not fully understand the intention of the lesson will exhaust important time and energy trying to determine what it is that the teacher expects them to learn (Moss et al., 2011).

**Present content in varied ways.** According to the research, presenting knowledge to students in both concrete and abstract ways, *concreteness fading*, is far more meaningful than simply using one method or the other (Pashler et al., 2007). Concreteness fading (Goldstone & Sakamoto, 2003), involves initially presenting concepts in a concrete fashion and then gradually replacing the original presentation with increasingly more abstract applications of the concept. With proper guidance from the teacher, students will deepen their understanding of the core concept and should be able to apply the knowledge to varying situations. In summary, by finding ways to navigate

between concrete and abstract examples, teachers will assist their students greatly in attaining true ownership and mastery of what they have learned (Huebner, 2008).

**Technology as a tool to achieve mastery.** Some school districts are generating impressive results by using technology as a tool to provide additional learning opportunities and support for students from at risk backgrounds. In one research study, seventh-grade students indicated that they preferred the use of a word processing program to complete writing activities, as compared with pen and paper composition (Baer, 1988). In a different study, third, fourth, and fifth grade students from disadvantaged backgrounds who engaged in computer assisted math instruction reported more positive attitudes towards school life, had increased self-concepts related to math, and scored higher on math achievement tests than students who did not participate in the computer assisted instruction (Mevarech & Rich, 1985). According to Mann (1989), a rationale to explain this increased level of academic performance can be found in the fact that individuals are more likely to learn what is being taught if they are involved in the process and technology certainly allows for increased participation by students.

### **Student At Risk Academic Ownership**

The current hierarchy in most schools indicates that adults, in most cases teachers, decide where students sit, with whom they will work, and how they will spend their time in class (Guskey & Anderman, 2008). While this approach aligns with many educators opinions regarding students' needing to respect authority and be compliant, it does little to foster a true sense of learning ownership among students. While no one would propose giving students' complete autonomy in decisions about their educational experiences, there is evidence to support the notion that students should receive

opportunities to demonstrate responsibility as they progress through school (Guskey & Anderman, 2008). Furthermore, research has shown that students want to be responsible and want to be involved in making meaningful decisions (Midgley & Feldlaufer, 1987).

**Provide students with a voice in the school.** There is a growing body of research that describes efforts by schools to provide students with a *voice* in school decision making through participation in projects and activities that differ from the traditional student roles of student council and planning pep rallies (Fielding, 2001; Mitra, 2008b). In some schools that have incorporated student voice initiatives, teachers may work with students and ask for feedback related to curriculum, assessment, and other instructional issues (Rudduck, 2007). One such school, Whitman High School, is located in a suburb of San Francisco, and serves a community of first-generation immigrants from Latin America and Asia, as well as working class African American and Caucasian families (Mitra, 2008a). As a result of the opportunities they have been given to work closely with teachers, students at Whitman report that they have a deeper understanding of their own learning, a greater understanding of teachers' instructional strategies, the curriculum and the classroom from a teacher's perspective, and more positive relationships with their teachers.

**Gradual release of responsibility.** One method that teachers can utilize to set students on a path to independent learning is to gradually release the responsibility for learning from teacher to student (Fisher & Frey, 2008a). The first step in the gradual release is effective modeling by the teacher. Because students and all humans are *hardwired* to imitate other humans (Winerman, 2005), it is important that teachers model the type of thinking and language that a new task will require students to demonstrate.

With the skill of reading, highly effective teachers focus their modeling on comprehension, word solving, text structure, and text features (Fisher, Frey, & Lapp, 2008). The second component of gradual release is referred to as shared or collaborative work. Regardless of the subject area or topic, students learn more and retain more content when they experience working in a productive group (Totten, Sills, Digby, & Russ, 1991). That said, the key to effective collaborative groups lies in each student being held accountable for some portion of the work and the teacher holding the group accountable for the completion of the assigned tasks (Fisher & Frey, 2008b). The third component of gradual release is guided instruction. Guided instruction is defined as, “the strategic use of cues, prompts, or questions to facilitate student thinking” (Fisher & Frey, 2008b, p. 36). In addition, guided instruction is a tool for teachers that will allow them to engage student thinking, without telling them what they should be thinking. The final component of gradual release is independent practice. Teachers should keep in mind that independent practice is not an appropriate strategy for introducing new material, rather it should be used to reinforce prior learning and as a means of helping students make connections to future content (Fisher & Frey, 2008b).

**Differentiated instruction.** When implemented effectively, differentiated instruction serves the dual purpose of conveying the desired content and also allowing teachers to go beyond mastery and explore ways to create an intrinsic desire to learn in their students (Tomlinson, 2008). Getting students to a place where they embrace ownership of their learning is a process and takes a substantial investment of time and effort on the part of the teacher and student. The first step of this process is building trust and that only occurs when students’ believe that the teacher has their best interests in

mind (Tomlinson, 2008). By creating and building upon positive exchanges with individual students and insuring that classroom routines exist to support student success, trust can be achieved between the teacher and student. The next step in the process of implementing effective differentiated instruction is making certain that the instruction that is being provided fits the needs of the students. An example of this in practice can be seen in the work of Kajder (2006), as she utilized a variety of creative strategies in her classroom to engage students who were reluctant readers. Specifically, Kajder (2006), used graphic novels, digital word walls, flash cards, and online journals to build students' skills, and connect with their experiences and develop their willingness to express themselves. The final aspect of using differentiated instruction as a tool to increase student ownership, is giving students a voice in their learning. An elementary teacher, Levy (1996), leveraged the power of voice by listening to student input as he crafted curriculum that would engage students and inspire their individual desire to learn. Differentiated instruction can be a powerful tool in creating efficacy and ownership of learning by students.

### **A Final Thought About Successful Futures for Students At Risk**

Every student that enters school is capable of learning and the fact that so many are failing to acquire the necessary skills is not an indication of their inadequacy, it is a result of schools' inability to meet the needs of all students (Slavin & Madden, 1989). While success in the early years of schooling is not a guarantee that students' will continue to find success throughout their school experience and beyond, failure in early grades almost certainly leads to failure in later schooling (Slavin et al., 1992). Even with the fiscal constraints of this era of public education, educators have the tools and

resources to address the unique needs of at risk students and have a responsibility to do so every minute and every hour of every day.

## CHAPTER THREE

### Methodology

#### Purpose of the Study

The purpose of this study was to compare the achievement, engagement, and behavior outcomes of youth at risk following a pre-eighth-grade summer academic enrichment program and participation in a school-wide, school year long, ownership, mastery, and grading initiative.

#### Participants

**Number of participants.** The maximum accrual for this study was ( $N = 40$ ) and included a naturally formed group of at risk students ( $n = 20$ ) who accepted the invitational pre-eighth-grade summer academic enrichment program and attended, and a naturally formed group of at risk students ( $n = 20$ ) who refused the invitational pre-eighth-grade summer academic enrichment program and did not attend. All students ( $N = 40$ ) participated in a school-wide, school year long, ownership, mastery, and grading initiative.

**Gender of participants.** Of the total number of identified subjects who accepted the invitational pre-eighth-grade summer academic enrichment program and attended ( $n = 20$ ) the gender ratio was 16 males (80%) and 4 females (20%). Of the total number of identified subjects who refused the invitational pre-eighth-grade summer academic enrichment program and did not attend ( $n = 20$ ) the gender ratio was 10 males (50%) and 10 females (50%).

**Age range of participants.** The age range for all study participants was from 13 years to 14 years. All participants were in the eighth-grade. The age range of the



participants is congruent with the research school district's age range demographics for eighth-grade students.

**Racial and ethnic origins of participants.** Of the total number of identified subjects who accepted the invitational pre-eighth-grade summer academic enrichment program and attended ( $n = 20$ ) the racial and ethnic origins were ten Caucasian (50%), six African American (30%), three Hispanic (15%) and one Asian American (5%). Of the total number of identified subjects who refused the invitational pre-eighth-grade summer academic enrichment program and did not attend ( $n = 20$ ) the racial and ethnic origins were seven Caucasian (35%), ten African American (50%), two Hispanic (10%) and one Native American (5%).

**Inclusion criteria of participants.** Eighth-grade students who attended the research school for the entire seventh-grade and eighth-grade school years and were invited to attend the invitational pre-eighth-grade summer academic enrichment program were eligible. In addition, the participants must have completed all yearly assessments during their seventh and eighth-grade years of schooling.

**Method of participant identification.** Eighth-grade students who received an invitation to a pre-eighth-grade summer academic enrichment program and also participated in a school-wide, school year long, ownership, mastery, and grading initiative. No individual identifiers were attached to the achievement, engagement, or behavior data of the 40 participating students in the two naturally formed groups.

### **Description of Procedures**

**Research design.** The pretest-posttest, two-group comparative efficacy study design is displayed in the following notation:

Group 1  $O_1 X_1 Y_1 O_2$

Group 2  $O_1 X_1 Y_2 O_2$

**Group 1 = study participants #1.** Naturally formed group of at risk students ( $n = 20$ ) who accepted and attended the invitational pre-eighth-grade summer academic enrichment program.

**Group 2 = study participants #2.** Naturally formed group of at risk students ( $n = 20$ ) who refused and did not attend the invitational pre-eighth-grade summer academic enrichment program.

**$X_1 =$  study constant.** All students participated in a school-wide, school year long, ownership, mastery, and grading initiative, attended the research school from seventh-grade through eighth-grade, and completed all required assessments.

**$Y_1 =$  study independent variable, at risk students, condition #1.** At risk students who accepted the invitational pre-eighth-grade summer academic enrichment program and attended

**$Y_2 =$  study independent variable, at risk students, condition #2.** At risk students who refused the invitational pre-eighth-grade summer academic enrichment program and did not attend

**$O_1 =$  study pretest dependent measures.** (1) Achievement as measured by the research school district's eighth-grade beginning of school year norm-referenced California Achievement Test for (a) Reading: (i) reading vocabulary, (ii) reading comprehension, and (iii) reading total Normal Curve Equivalent (NCE) scores, (b) Language: (i) language mechanics, (ii) language expression, and (iii) language total NCE scores, and (c) Math: (i) math computation, (ii) math concepts and applications, and (iii)

math total NCE scores. (2) Classroom achievement as measured by the research school district's end of the seventh-grade school year second semester core curriculum grades (grade point average) for (a) reading, (b) language arts, (c) mathematics, (d) science, (e) social studies, and (f) cumulative grade point average. (3) Writing achievement as measured by the research school's beginning of the eighth-grade school year Fall Building Writing Assessment (FBWA). (4) Behavior in school as measured by the end of seventh-grade school year cumulative frequencies for (a) absences, (b) tardies, and (c) discipline referrals.

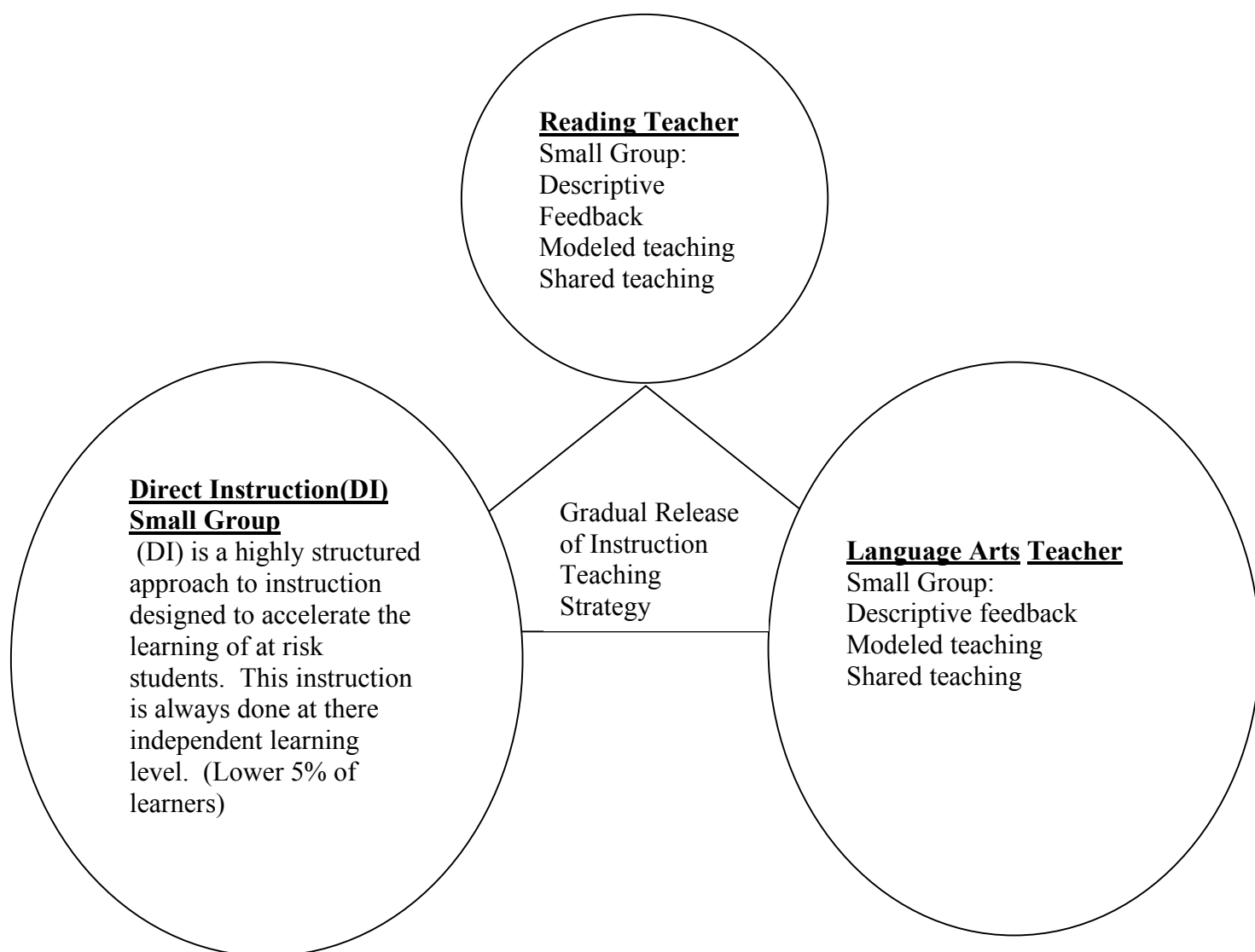
**O<sub>2</sub> = study posttest dependent measures.** (1) Achievement as measured by the research school district's eighth-grade ending of school year norm-referenced California Achievement Test for (a) Reading: (i) reading vocabulary, (ii) reading comprehension, and (iii) reading total Normal Curve Equivalent (NCE) scores, (b) Language: (i) language mechanics, (ii) language expression, and (iii) language total NCE scores, and (c) Math: (i) math computation, (ii) math concepts and applications, and (iii) math total NCE scores. (2) Classroom achievement as measured by the research school district's end of the eighth-grade school year second semester core curriculum grades (grade point average) for (a) reading, (b) language arts, (c) mathematics, (d) science, (e) social studies, and (f) cumulative grade point average. (3) Writing achievement as measured by the research school district's ending of the eighth-grade school year (a) Spring State Writing Assessment (SSWA). (4) Engagement in school as measured by the end of eighth-grade school year cumulative participation frequencies for athletics and activities combined. (5) Behavior in school as measured by the end of eighth-grade school year cumulative frequencies for (a) absences, (b) tardies, and (c) discipline referrals.

## **Implementation of Independent Variables**

The independent variables were at risk students who did or did not attend an invitational pre-eighth-grade summer academic enrichment program. Each group of at risk students participated in a school-wide, school year long, ownership, mastery, and grading initiative during their eighth-grade year of schooling. Following is detail about the research school's programs to academically support youth at risk.

**Invitational pre-eighth-grade summer academic enrichment program.** The model of instruction for Alice Buffett Magnet Middle School's invitational pre-eighth-grade summer academic enrichment program integrates content areas challenging the emergent learner. Student understanding will increase when subjects are not isolated as math, writing, or reading. Their understanding of concepts will increase as "real life learning" emerges in a classroom grouping all content areas as experiential learning. Learning stations will be created to integrate problem solving, written communications, and reading of text as a means to move toward learning goals with a clear picture of the road leading to success. Students will move to learning stations only after direct instruction has laid a solid path toward goals rather than creating roadblocks. Some students may stay in small group instruction with one teacher longer while others move to designated learning areas based on performance with a second teacher. Knowing some students may not move beyond the small group instruction, constant rotation of instructional strategies will be implemented. The third reading teacher will become the "safety net" as individual students will rotate through the learning station with emphasis on filling the gaps in learning shown through ongoing assessments of students. When a specific skill needs to be re-taught, it will be immediate and specific until mastery is

attained. Integration of content areas will allow the student to work in a *strengths based* learning environment building on what the student already knows in order to increase knowledge. Three teachers will be utilized in the teaching model. All three teachers will rotate teaching mini lessons, small group, learning stations, and intervention of skill remediation. All teachers will write lesson plans, create the learning environment, and implement the plan on an equal basis. Using data as the basis of learning will mean assessment will be ongoing daily and used throughout the summer school experience.



**School-wide, school year long, ownership, mastery, and grading initiative.**

One of the means of reaching academic excellence is through standardized policies and practices between and amongst teachers. It is a far easier task for students and parents to understand and support the school when all staff utilizes a standardized set of practices and policies. With the goal of providing an academically rigorous education that is fair and equitable for all students, the leadership team and teachers of Alice Buffett Magnet Middle School have designed and implemented best practices for assessment, grading, and homework. Research clearly shows that descriptive feedback from the teacher during learning that guides the student on how to change and improve has the most powerful single influence on student achievement (Hattie, 1992). When students understand what needs to be corrected for improvement, they not only make the needed corrections but also learn at significantly higher levels. In addition, when students receive rubrics and student samples of work that illustrate A, B, C, and D level work, they clearly know the target and expectations for learning (Moss et al., 2011). A team of teachers and administrators completed a review of the research on grading and homework practices and the impact on student achievement. Based on that research, Buffett's grading and homework policies will be as follows, (a) nonacademic factors such as behavior, attendance, and effort are not incorporated into grades, (b) in each course students will be allowed a minimum of three redos of formative assignments for full credit each quarter if the original assignment was turned in on time, (c) one or more late assignments without penalty will be allowed per quarter, (d) grades are composed of assignments and assessments that are both completed in class or assigned as homework, (e) accommodations are provided to students with special needs without adjusting or

reducing grades, (f) grading is based on content not decorations, (g) there will be no extra credit or bonus points, (h) group grades are not utilized, (i) grading is not based on a curve, (j) zeros are never used--a student who attempts the assignment and fails is to receive a failing grade of 62% (did not meet expectations, DME) and students will receive a grade of 54% (not handed in, NHI) for work not handed in, (k) grades will be posted every other week and descriptive feedback with rubrics will be provided on 75% of all assignments and, (l) students will have 10-15 minutes of homework per night times their grade level--generally speaking fifth-graders will have 50-75 minutes, sixth-graders will have 60-90 minutes, seventh-graders will have 70-105 minutes, and eighth-graders will have 80-120 minutes; fifteen or more assignments will be recorded each quarter in all classes except physical education, music, and daily reading--physical education and music courses will have eight or more assessments or assignments each quarter and daily reading courses will have 30 per quarter.

**Buffett Grading Scale.**

A = 100% – 93%

B = 92% – 85%

C = 84% – 78%

D = 77% – 70%

F = 69% – 63%

DME= 62% (Did not Meet Expectations)

NHI= 54% (Not Handed In)

## **Dependent Measures**

The study dependent variables were achievement, school engagement, and behavior. Achievement data was analyzed using the following dependent measures including: (1) Beginning and ending eighth-grade school year norm-referenced California Achievement Test scores for (a) Reading: (i) reading vocabulary, (ii) reading comprehension, and (iii) reading total Normal Curve equivalent (NCE), (b) Language: (i) language mechanics, (ii) language expression, and (iii) language total NCE, and (c) Math: (i) math computation, (ii) math concepts and applications, and (iii) math total NCE. (2) Ending of seventh-grade and ending of eighth-grade second semester core curriculum grades for (a) reading, (b) language arts, (c) mathematics, (d) science, (e) social studies, and (f) cumulative grade point average. (3) Beginning and ending of eighth-grade school year writing performance as measured by the research school's Fall Building Writing Assessment (FBWA) and the Spring State Writing Assessment (SSWA). Engagement data was analyzed using the ending of seventh-grade and ending of eighth-grade cumulative participation frequencies for athletics and activities combined. Behavior data was analyzed using the ending of seventh-grade and ending of eighth-grade cumulative frequencies for (a) absences, (b) tardies, and (c) discipline referrals. All achievement, engagement, and behavior data was collected retrospectively from seventh-grade and eighth-grade data.

## **Research Questions and Data Analysis**

The following research questions were used to analyze student achievement outcomes as measured by norm-referenced achievement Normal Curve Equivalent (NCE) scores for reading, language arts, and math, end of eighth-grade core curriculum grades



and cumulative grade point average, and end of eighth-grade Spring State Writing Assessment (SSWA) scores.

**Overarching Pretest-Posttest Achievement Research Question #1.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their pretest beginning of eighth-grade school year compared to posttest ending of eighth-grade school year norm-referenced California Achievement Test (a) reading vocabulary, (b) reading comprehension, and (c) total reading NCE scores?

**Sub-Question #1a.** Was there a statistically significant difference between at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative beginning eighth-grade compared to ending eighth-grade norm-referenced California Achievement Test (a) reading vocabulary, (b) reading comprehension, and (c) total reading NCE scores?

**Analysis.** Research Sub-Question #1a was analyzed using dependent *t* tests to examine the significance of the difference between students' pretest-posttest reading achievement scores. Because multiple statistical tests were conducted, a one-tailed .01 alpha level was employed to help control for Type 1 errors. Means and standard deviations were displayed in tables.

**Overarching Pretest-Posttest Achievement Research Question #2.** Did at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading

initiative lose, maintain, or improve their pretest beginning of eighth-grade school year compared to posttest ending of eighth-grade school year norm-referenced California Achievement Test (a) reading vocabulary, (b) reading comprehension, and (c) total reading NCE scores?

**Sub-Question #2a.** Was there a statistically significant difference between at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative beginning eighth-grade compared to ending eighth-grade norm-referenced California Achievement Test (a) reading vocabulary, (b) reading comprehension, and (c) total reading NCE scores?

**Analysis.** Research Sub-Question #2a was analyzed using dependent *t* tests to examine the significance of the difference between students' pretest-posttest reading achievement scores. Because multiple statistical tests were conducted, a one-tailed .01 alpha level was employed to help control for Type 1 errors. Means and standard deviations were displayed in tables.

**Overarching Posttest-Posttest Achievement Research Question #3.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative compared to at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative have congruent or different posttest ending of eighth-grade school year norm-referenced California Achievement Test (a) reading vocabulary, (b) reading comprehension, and (c) total reading NCE scores?

**Sub-Question #3a.** Was there a statistically significant difference between at risk students who completed and at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ending eighth-grade compared to ending eighth-grade norm-referenced California Achievement Test (a) reading vocabulary, (b) reading comprehension, and (c) total reading NCE scores?

**Analysis.** Research Sub-Question #3a was analyzed using a single classification Analysis of Variance (ANOVA) to determine the main effect congruence or difference between students' posttest-posttest reading achievement scores. An *F* ratio was calculated and an alpha level of .05 was utilized to test the null hypothesis. Means and standard deviations were displayed in tables.

**Overarching Pretest-Posttest Achievement Research Question #4.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their pretest beginning of eighth-grade school year compared to posttest ending of eighth-grade school year norm-referenced California Achievement Test (a) language mechanics, (b) language expression, and (c) language total normal curve equivalent NCE scores?

**Sub-Question #4a.** Was there a statistically significant difference between at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative beginning eighth-grade compared to ending eighth-grade norm-

referenced California Achievement Test (a) language mechanics, (b) language expression, and (c) language total normal curve equivalent NCE scores?

**Analysis.** Research Sub-Question #4a was analyzed using dependent  $t$  tests to examine the significance of the difference between students' pretest-posttest language achievement scores. Because multiple statistical tests were conducted, a one-tailed .01 alpha level was employed to help control for Type 1 errors. Means and standard deviations were displayed in tables.

**Overarching Pretest-Posttest Achievement Research Question #5.** Did at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their pretest beginning of eighth-grade school year compared to posttest ending of eighth-grade school year norm-referenced California Achievement Test (a) language mechanics, (b) language expression, and (c) language total normal curve equivalent NCE scores?

**Sub-Question #5a.** Was there a statistically significant difference between at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative beginning eighth-grade compared to ending eighth-grade norm-referenced California Achievement Test (a) language mechanics, (b) language expression, and (c) language total normal curve equivalent NCE scores?

**Analysis.** Research Sub-Question #5a was analyzed using dependent  $t$  tests to examine the significance of the difference between students' pretest-posttest language achievement scores. Because multiple statistical tests were conducted, a one-tailed .01

alpha level was employed to help control for Type 1 errors. Means and standard deviations were displayed in tables.

**Overarching Posttest-Posttest Achievement Research Question #6.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative compared to at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative have congruent or different posttest ending of eighth-grade school year norm-referenced California Achievement Test (a) language mechanics, (b) language expression, and (c) language total normal curve equivalent NCE scores?

**Sub-Question #6a.** Was there a statistically significant difference between at risk students who completed and at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ending eighth-grade compared to ending eighth-grade norm-referenced California Achievement Test (a) language mechanics, (b) language expression, and (c) language total normal curve equivalent NCE scores?

**Analysis.** Research Sub-Question #6a was analyzed using a single classification Analysis of Variance (ANOVA) to determine the main effect congruence or difference between students' posttest-posttest language achievement scores. An  $F$  ratio was calculated and an alpha level of .05 was utilized to test the null hypothesis. Means and standard deviations were displayed in tables.

**Overarching Pretest-Posttest Achievement Research Question #7.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their pretest beginning of eighth-grade school year compared to posttest ending of eighth-grade school year norm-referenced California Achievement Test (a) math computation, (b) math concepts and applications, (c) math total normal curve equivalent NCE scores?

**Sub-Question #7a.** Was there a statistically significant difference between at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative beginning eighth-grade compared to ending eighth-grade norm-referenced California Achievement Test (a) math computation, (b) math concepts and applications, (c) math total normal curve equivalent NCE scores?

**Analysis.** Research Sub-Question #7a was analyzed using dependent *t* tests to examine the significance of the difference between students' pretest-posttest math achievement scores. Because multiple statistical tests were conducted, a one-tailed .01 alpha level was employed to help control for Type 1 errors. Means and standard deviations were displayed in tables.

**Overarching Pretest-Posttest Achievement Research Question #8.** Did at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their pretest beginning of eighth-grade school year compared to posttest ending of eighth-grade school year norm-referenced California

Achievement Test (a) math computation, (b) math concepts and applications, (c) math total normal curve equivalent NCE scores?

**Sub-Question #8a.** Was there a statistically significant difference between at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative beginning eighth-grade compared to ending eighth-grade norm-referenced California Achievement Test (a) math computation, (b) math concepts and applications, (c) math total normal curve equivalent NCE scores?

**Analysis.** Research Sub-Question #8a was analyzed using dependent *t* tests to examine the significance of the difference between students' pretest-posttest math achievement scores. Because multiple statistical tests were conducted, a one-tailed .01 alpha level was employed to help control for Type 1 errors. Means and standard deviations were displayed in tables.

**Overarching Posttest-Posttest Achievement Research Question #9.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative compared to at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative have congruent or different posttest ending of eighth-grade school year norm-referenced California Achievement Test (a) math computation, (b) math concepts and applications, (c) math total normal curve equivalent NCE scores?

**Sub-Question #9a.** Was there a statistically significant difference between at risk students who completed and at risk students who refused a pre-eighth-

grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ending eighth-grade compared to ending eighth-grade norm-referenced California Achievement Test (a) math computation, (b) math concepts and applications, (c) math total normal curve equivalent NCE scores?

**Analysis.** Research Sub-Question #9a was analyzed using a single classification Analysis of Variance (ANOVA) to determine the main effect congruence or difference between students' posttest-posttest math achievement scores. An  $F$  ratio was calculated and an alpha level of .05 was utilized to test the null hypothesis. Means and standard deviations were displayed in tables.

**Overarching Pretest-Posttest Achievement Research Question #10.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their classroom performance as measured by the research school district's ending of seventh-grade school year core curriculum grades (grade point average) compared to ending of eighth-grade school year core curriculum grades (grade point average) for: (a) reading; (b) language arts; (c) mathematics; (d) science; (e) social studies grade scores; and (f) cumulative grade point average?

**Sub-Question #10a.** Was there a statistically significant difference between at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative end of the seventh-grade school core curriculum grades (grade point average) compared to end of eighth-grade school core curriculum grades (grade point



average) for: (a) reading; (b) language arts; (c) mathematics; (d) science; (e) social studies grade scores; and (f) cumulative grade point average?

**Analysis.** Research Sub-Question #10a was analyzed using dependent  $t$  tests to examine the significance of the difference between students' pretest-posttest classroom performance. Because multiple statistical tests were conducted, a one-tailed .01 alpha level was employed to help control for Type 1 errors. Means and standard deviations were displayed in tables.

**Overarching Pretest-Posttest Achievement Research Question #11.** Did at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their classroom performance as measured by the research school district's ending of seventh-grade school year core curriculum grades (grade point average) compared to ending of eighth-grade school year core curriculum grades (grade point average) for: (a) reading; (b) language arts; (c) mathematics; (d) science; (e) social studies grade scores; and (f) cumulative grade point average?

**Sub-Question #11a.** Was there a statistically significant difference between at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative end of the seventh-grade school core curriculum grades (grade point average) compared to end of eighth-grade school core curriculum grades (grade point average) for: (a) reading; (b) language arts; (c) mathematics; (d) science; (e) social studies grade scores; and (f) cumulative grade point average?

**Analysis.** Research Sub-Question #11a was analyzed using dependent *t* tests to examine the significance of the difference between students' pretest-posttest classroom performance. Because multiple statistical tests were conducted, a one-tailed .01 alpha level was employed to help control for Type 1 errors. Means and standard deviations were displayed in tables.

**Overarching Posttest-Posttest Achievement Research Question #12.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative compared to at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative have congruent or different classroom performance as measured by the research school district's ending of the eighth-grade school year core curriculum grades (grade point average) for: (a) reading; (b) language arts; (c) mathematics; (d) science; (e) social studies grade scores; and (f) cumulative grade point average?

**Sub-Question #12a.** Was there a statistically significant difference between at risk students who completed and students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ending eighth-grade compared to ending eighth-grade classroom performance as measured by core curriculum grades (grade point average) for: (a) reading; (b) language arts; (c) mathematics; (d) science; (e) social studies grade scores; and (f) cumulative grade point average?

**Analysis.** Research Sub-Question #12a was analyzed using a single classification Analysis of Variance (ANOVA) to determine the main effect congruence or difference between students' posttest-posttest classroom performance. An  $F$  ratio was calculated and an alpha level of .05 was utilized to test the null hypothesis. Means and standard deviations were displayed in tables.

**Overarching Pretest-Posttest Achievement Research Question #13.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their writing performance as measured by the research school's beginning eighth-grade Fall Building Writing Assessment (FBWA) scores compared to ending eighth-grade Spring State Writing Assessment (SSWA) scores?

**Sub-Question #13a.** Was there a statistically significant difference between at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative beginning eighth-grade FBWA scores compared to ending eighth-grade SSWA scores?

**Analysis.** Research Sub-Question #13a was analyzed using dependent  $t$  tests to examine the significance of the difference between students' pretest-posttest writing achievement. Because multiple statistical tests were conducted, a one-tailed .01 alpha level was employed to help control for Type 1 errors. Means and standard deviations were displayed in tables.

**Overarching Pretest-Posttest Achievement Research Question #14.** Did at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their writing performance as measured by the research school's beginning eighth-grade FBWA scores compared to ending eighth-grade SSWA scores?

**Sub-Question #14a.** Was there a statistically significant difference between at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative beginning eighth-grade FBWA scores compared to ending eighth-grade SSWA scores?

**Analysis.** Research Sub-Question #14a was analyzed using dependent *t* tests to examine the significance of the difference between students' pretest-posttest writing achievement. Because multiple statistical tests were conducted, a one-tailed .01 alpha level was employed to help control for Type 1 errors. Means and standard deviations were displayed in tables.

**Overarching Posttest-Posttest Achievement Research Question #15.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative compared to at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative have congruent or different writing performance as measured by the research school district's ending eighth-grade SSWA scores?

**Sub-Question #15a.** Was there a statistically significant difference between at risk students who completed and at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ending eighth-grade compared to ending eighth-grade SSWA scores?

**Analysis.** Research Sub-Question #15a was analyzed using a single classification Analysis of Variance (ANOVA) to determine the main effect congruence or difference between students' posttest-posttest writing achievement scores. An *F* ratio was calculated and an alpha level of .05 was utilized to test the null hypothesis. Means and standard deviations were displayed in tables.

The following research question was used to analyze school engagement outcomes as measured by cumulative participation frequencies for athletics and activities combined.

**Overarching Posttest-Posttest School Engagement Research Question #16.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative compared to at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative have congruent or different school engagement as measured by ending of eighth-grade school year cumulative participation frequencies for athletics and activities?

**Sub-Question #16a.** Was there a statistically significant difference between at risk students who completed and students who refused a pre-eighth-grade

summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ending of eighth-grade school year cumulative participation frequencies compared to ending of eighth-grade school year cumulative participation frequencies for athletics and activities?

**Analysis.** Research Sub-Question #16a was analyzed utilizing a chi-square test of significance to compare observed verses expected end of school year athletics and activities combined frequencies. Because multiple statistical tests were conducted, a .01 alpha level was employed to help control for Type 1 errors. Frequencies and percentages were displayed in tables.

The following research questions were used to analyze behavior outcomes as measured by cumulative frequencies for absences, tardies, and discipline referrals.

**Overarching Pretest-Posttest Behavior Research Question #17.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their behavior as measured by the ending of seventh-grade school year cumulative behavior frequencies compared to ending of eighth-grade school year cumulative behavior frequencies for absences, tardies, and discipline referrals?

**Sub-Question #17a.** Was there a statistically significant difference between at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ending of seventh-grade cumulative behavior frequencies compared to

ending of eighth-grade cumulative behavior frequencies for absences, tardies, and discipline referrals?

**Analysis.** Research Sub-Question #17a was analyzed using dependent  $t$  tests to examine the significance of the difference between students' pretest-posttest cumulative behavior frequencies. Because multiple statistical tests were conducted, a one-tailed .01 alpha level was employed to help control for Type 1 errors. Means and standard deviations were displayed in tables.

**Overarching Pretest-Posttest Behavior Research Question #18.** Did at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative lose, maintain, or improve their behavior as measured by the ending of seventh-grade school year cumulative behavior frequencies compared to ending of eighth-grade school year cumulative behavior frequencies for absences, tardies, and discipline referrals?

**Sub-Question #18a.** Was there a statistically significant difference between at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ending of seventh-grade cumulative behavior frequencies compared to ending of eighth-grade cumulative behavior frequencies for absences, tardies, and discipline referrals?

**Analysis.** Research Sub-Question #18a was analyzed using dependent  $t$  tests to examine the significance of the difference between students' pretest-posttest cumulative behavior frequencies. Because multiple statistical tests were conducted, a one-tailed .01

alpha level was employed to help control for Type 1 errors. Means and standard deviations were displayed in tables.

**Overarching Posttest-Posttest Behavior Research Question #19.** Did at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative compared to at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative have congruent or different behavior as measured by ending of eighth-grade school year cumulative behavior frequencies for absences, tardies and discipline referrals?

**Sub-Question #19a.** Was there a statistically significant difference between at risk students who completed and students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ending eighth-grade compared to ending eighth-grade cumulative behavior frequencies for absences, tardies, and discipline referrals?

**Analysis.** Research Sub-Question #19a was analyzed using a single classification Analysis of Variance (ANOVA) to determine the main effect congruence or difference between students' posttest-posttest cumulative behavior frequencies. An  $F$  ratio was calculated and an alpha level of .05 was utilized to test the null hypothesis. Means and standard deviations were displayed in tables.



## **Data Collection Procedures**

All student achievement, school engagement, and behavior data was retrospectively, archival, and routinely collected school information. Permissions from the appropriate school research personnel were obtained. Non-coded numbers were used to display individual de-identified achievement data. Aggregated group data, descriptive statistics, and inferential statistical analysis were utilized and reported with means and standard deviations on tables.

**Performance site.** The research was conducted in the public school setting through normal educational practices. The study procedure did not interfere in any way with the normal educational practices of the public schools and did not involve coercion or discomfort of any kind. All data was analyzed in the office of the Primary Investigator at Alice Buffett Magnet Middle School located at 14101 Larimore Avenue, Omaha, Nebraska, 68164 or the office of the doctoral dissertation supervisor. Data was stored on computer drives for statistical analysis. Data and computer flash drives were stored in a locked records vault. No individual identifiers were attached to the data.

**Confidentiality.** Non-coded numbers were used to display individual de-identified achievement and skills data. Aggregated group data, descriptive statistics, and parametric statistical analysis were utilized and reported as means and standard deviations on tables.

**Informed consent.** All retrospective achievement, school engagement and behavior data were routinely collected school information. Permissions from the appropriate school and district research personnel were obtained. No identifying student, teacher, or parent information was used in this study.

**Institutional Review Board (IRB) for the Protection of Human Subjects**

**Approval Category.** The exemption categories for this study were category 1 and category 4, 45CFR46.101 (b). The research was conducted in the public school setting through normal educational practices. The study procedure did not interfere in any way with the normal educational practices of the public schools and did not involve coercion or discomfort of any kind. Permission from the appropriate school and district personnel was obtained and documented before University of Nebraska Medical Center and University of Nebraska at Omaha Institutional Review Board (IRB) for the Protection of Human Subjects, approval was granted.

## CHAPTER FOUR

### Results

#### **Purpose of the Study**

The purpose of this study was to compare the achievement, engagement, and behavior outcomes of youth at risk following a pre-eighth-grade summer academic enrichment program and participation in a school-wide, school year long, ownership, mastery, and grading initiative.

#### **Dependent Measures**

The study's three dependent variables were achievement, school engagement, and behavior. Achievement data were analyzed using the following dependent measures including: (1) Beginning and ending eighth-grade school year norm-referenced California Achievement Test scores for (a) Reading: (i) reading vocabulary, (ii) reading comprehension, and (iii) reading total Normal Curve Equivalent (NCE), (b) Language: (i) language mechanics, (ii) language expression, and (iii) language total NCE, and (c) Math: (i) math computation, (ii) math concepts and applications, and (iii) math total NCE, (2) ending of seventh-grade and ending of eighth-grade second semester core curriculum grades for (a) reading, (b) language arts, (c) mathematics, (d) science, (e) social studies, and (f) cumulative grade point average, and (3) beginning and ending of eighth-grade school year writing performance as measured by the research school's Fall Building Writing Assessment (FBWA) and the Spring State Writing Assessment (SSWA). Engagement data was analyzed using the ending of seventh-grade and ending of eighth-grade cumulative participation frequencies for athletics and activities combined. Behavior data was analyzed using the ending of seventh-grade and ending of eighth-

grade cumulative frequencies for (a) absences, (b) tardies, and (c) discipline referrals. All study achievement, engagement, and behavior data related to each of the dependent variables were retrospective, archival, and routinely collected school information. Permission from the appropriate school research personnel was obtained before data were collected and analyzed.

Table 1 displays demographic information of individual eighth-grade students at risk who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. Table 2 displays demographic information of individual eighth-grade students at risk who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative.

### **Research Question #1**

Table 3 displays beginning eighth-grade pretest compared to ending eighth-grade posttest California Achievement Test (a) reading vocabulary, (b) reading comprehension, and (c) total reading Normal Curve Equivalent scores for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The first pretest-posttest hypothesis was tested using the dependent  $t$  test. As seen in Table 3, null hypotheses were not rejected for the beginning eighth-grade pretest compared to ending eighth-grade posttest California Achievement Test (a) reading vocabulary, (b) reading comprehension, and (c) total reading Normal Curve Equivalent scores for at risk eighth-grade students who completed a pre-eighth-grade summer

academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The pretest reading vocabulary Normal Curve Equivalent score for the at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 38.30$ ,  $SD = 18.12$ ) compared to the posttest reading vocabulary Normal Curve Equivalent score ( $M = 39.45$ ,  $SD = 22.36$ ) was not statistically significantly different in the direction of an improved posttest score,  $t(19) = 0.46$ ,  $p = .33$  (one-tailed),  $d = 0.107$ . Also found in Table 3 pretest reading comprehension Normal Curve Equivalent score for the at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 32.75$ ,  $SD = 16.65$ ) compared to the posttest reading comprehension Normal Curve Equivalent score ( $M = 36.85$ ,  $SD = 21.62$ ) was not statistically significantly different in the direction of an improved posttest score,  $t(19) = 1.09$ ,  $p = .14$  (one-tailed),  $d = 0.253$ . Finally, as found in Table 3 pretest reading total Normal Curve Equivalent score for the at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 35.55$ ,  $SD = 15.67$ ) compared to the posttest reading total Normal Curve Equivalent score ( $M = 37.40$ ,  $SD = 21.15$ ) was not statistically significantly different in the direction of an improved posttest score,  $t(19) = 0.67$ ,  $p = .26$  (one-tailed),  $d = 0.163$ .

**Research Question #2**

Table 4 displays beginning eighth-grade pretest compared to ending eighth-grade posttest California Achievement Test (a) reading vocabulary, (b) reading comprehension, and (c) total reading Normal Curve Equivalent scores for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The second pretest-posttest hypothesis was tested using the dependent  $t$  test. As seen in Table 4, null hypotheses were not rejected for the beginning eighth-grade pretest compared to ending eighth-grade posttest California Achievement Test (a) reading vocabulary and (b) reading comprehension and were rejected for (c) total reading Normal Curve Equivalent scores for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The pretest reading vocabulary Normal Curve Equivalent score for the at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 39.00$ ,  $SD = 16.30$ ) compared to the posttest reading vocabulary Normal Curve Equivalent score ( $M = 42.65$ ,  $SD = 16.64$ ) was not statistically significantly different in the direction of an improved posttest score,  $t(19) = 1.58$ ,  $p = .07$  (one-tailed),  $d = 0.351$ . Also found in Table 4 pretest reading comprehension Normal Curve Equivalent score for the at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 37.20$ ,  $SD = 14.58$ ) compared to the posttest reading comprehension Normal Curve Equivalent score

( $M = 40.60$ ,  $SD = 18.24$ ) was not statistically significantly different in the direction of an improved posttest score,  $t(19) = 1.65$ ,  $p = .06$  (one-tailed),  $d = 0.392$ . Finally, as found in Table 4 pretest reading total Normal Curve Equivalent score for the at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 38.30$ ,  $SD = 14.19$ ) compared to the posttest reading total Normal Curve Equivalent score ( $M = 41.60$ ,  $SD = 16.98$ ) was statistically significantly different in the direction of an improved posttest score,  $t(19) = 2.05$ ,  $p < .05$  (one-tailed),  $d = 0.473$ .

### **Research Question #3**

Table 5 displays posttest results of Analysis of Variance (ANOVA) ending eighth-grade posttest compared to ending eighth-grade posttest California Achievement Test reading vocabulary Normal Curve Equivalent scores for eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. As seen in Table 5 the null hypothesis was not rejected for the ending eighth-grade posttest compared to ending eighth-grade posttest California Achievement Test reading vocabulary Normal Curve Equivalent scores for eighth-grade at risk students who completed ( $M = 39.45$ ,  $SD = 22.37$ ) and refused ( $M = 42.65$ ,  $SD = 16.65$ ) a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative where  $F(1, 38) = 0.26$ ,  $p = .61$ .

Table 6 displays posttest results of ANOVA ending eighth-grade posttest compared to ending eighth-grade posttest California Achievement Test reading comprehension Normal Curve Equivalent scores for eighth-grade at risk students who

completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. As seen in Table 6 the null hypothesis was not rejected for the ending eighth-grade posttest compared to ending eighth-grade posttest California Achievement Test reading comprehension Normal Curve Equivalent scores for eighth-grade at risk students who completed ( $M = 36.85$ ,  $SD = 21.62$ ) and refused ( $M = 40.60$ ,  $SD = 18.25$ ) a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative where  $F(1, 38) = 0.35$ ,  $p = .56$ .

Table 7 displays posttest results of ANOVA ending eighth-grade posttest compared to ending eighth-grade posttest California Achievement Test reading total Normal Curve Equivalent scores for eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. As seen in Table 7 the null hypothesis was not rejected for the ending eighth-grade posttest compared to ending eighth-grade posttest California Achievement Test reading total Normal Curve Equivalent scores for eighth-grade at risk students who completed ( $M = 37.40$ ,  $SD = 21.15$ ) and refused ( $M = 41.60$ ,  $SD = 16.98$ ) a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative where  $F(1, 38) = 0.48$ ,  $p = .49$ .

#### **Research Question #4**

Table 8 displays beginning eighth-grade pretest compared to ending eighth-grade posttest California Achievement Test (a) language mechanics, (b) language expression,



and (c) total language Normal Curve Equivalent scores for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The first pretest-posttest hypothesis was tested using the dependent  $t$  test. As seen in Table 8, null hypotheses were not rejected for the beginning eighth-grade pretest compared to ending eighth-grade posttest California Achievement Test (a) language mechanics and were rejected for (b) language expression, and (c) total language Normal Curve Equivalent scores for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The pretest language mechanics Normal Curve Equivalent score for the at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 39.95$ ,  $SD = 24.89$ ) compared to the posttest language mechanics Normal Curve Equivalent score ( $M = 41.30$ ,  $SD = 25.70$ ) was not statistically significantly different in the direction of an improved posttest score,  $t(19) = 0.36$ ,  $p = .36$  (one-tailed),  $d = 0.080$ . Also found in Table 8 pretest language expression Normal Curve Equivalent score for the at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 31.90$ ,  $SD = 22.68$ ) compared to the posttest language expression Normal Curve Equivalent score ( $M = 38.05$ ,  $SD = 21.64$ ) was statistically significantly different in the direction of an improved posttest score,  $t(19) = 2.30$ ,  $p < .05$  (one-tailed),  $d = 0.507$ . Finally, as found in Table 8 pretest language total Normal Curve Equivalent score

for the at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 35.95$ ,  $SD = 23.49$ ) compared to the posttest language total Normal Curve Equivalent score ( $M = 40.05$ ,  $SD = 22.93$ ) was statistically significantly different in the direction of an improved posttest score,  $t(19) = 1.88$ ,  $p < .05$  (one-tailed),  $d = 0.416$ .

### **Research Question #5**

Table 9 displays beginning eighth-grade pretest compared to ending eighth-grade posttest California Achievement Test (a) language mechanics, (b) language expression, and (c) total language Normal Curve Equivalent scores for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The second pretest-posttest hypothesis was tested using the dependent  $t$  test. As seen in Table 9, null hypotheses were not rejected for the beginning eighth-grade pretest compared to ending eighth-grade posttest California Achievement Test (a) language mechanics and were rejected for (b) language expression, and (c) total language Normal Curve Equivalent scores for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The pretest language mechanics Normal Curve Equivalent score for the at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 47.55$ ,  $SD = 18.59$ ) compared to the posttest language mechanics Normal Curve Equivalent score ( $M = 50.20$ ,

$SD = 13.59$ ) was not statistically significantly different in the direction of an improved posttest score,  $t(19) = 0.88, p = .19$  (one-tailed),  $d = 0.209$ . Also found in Table 9 pretest language expression Normal Curve Equivalent score for the at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 34.40, SD = 16.69$ ) compared to the posttest language expression Normal Curve Equivalent score ( $M = 43.50, SD = 21.61$ ) was statistically significantly different in the direction of an improved posttest score,  $t(19) = 2.70, p = .01$  (one-tailed),  $d = 0.624$ . Finally, as found in Table 9 pretest language total Normal Curve Equivalent score for the at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 40.15, SD = 17.31$ ) compared to the posttest language total Normal Curve Equivalent score ( $M = 45.60, SD = 17.71$ ) was statistically significantly different in the direction of an improved posttest score,  $t(19) = 1.95, p < .05$  (one-tailed),  $d = 0.432$ .

#### **Research Question #6**

Table 10 displays posttest results of Analysis of Variance (ANOVA) ending eighth-grade posttest compared to ending eighth-grade posttest California Achievement Test language mechanics Normal Curve Equivalent scores for eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. As seen in Table 10 the null hypothesis was not rejected for the ending eighth-grade posttest compared to ending eighth-grade posttest California Achievement

Test language mechanics Normal Curve Equivalent scores for eighth-grade at risk students who completed ( $M = 41.30$ ,  $SD = 25.71$ ) and refused ( $M = 50.20$ ,  $SD = 13.59$ ) a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative where  $F(1, 38) = 1.87$ ,  $p = .18$ .

Table 11 displays posttest results of ANOVA ending eighth-grade posttest compared to ending eighth-grade posttest California Achievement Test language expression Normal Curve Equivalent scores for eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. As seen in Table 11 the null hypothesis was not rejected for the ending eighth-grade posttest compared to ending eighth-grade posttest California Achievement Test language expression Normal Curve Equivalent scores for eighth-grade at risk students who completed ( $M = 38.50$ ,  $SD = 21.65$ ) and refused ( $M = 43.50$ ,  $SD = 21.61$ ) a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative where  $F(1, 38) = 0.63$ ,  $p = .43$ .

Table 12 displays posttest results of ANOVA ending eighth-grade posttest compared to ending eighth-grade posttest California Achievement Test language total Normal Curve Equivalent scores for eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. As seen in Table 12 the null hypothesis was not rejected for the ending eighth-grade posttest

compared to ending eighth-grade posttest California Achievement Test language total Normal Curve Equivalent scores for eighth-grade at risk students who completed ( $M = 40.05$ ,  $SD = 22.93$ ) and refused ( $M = 45.60$ ,  $SD = 17.71$ ) a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative where  $F(1, 38) = 0.73$ ,  $p = .40$ .

### **Research Question #7**

Table 13 displays beginning eighth-grade pretest compared to ending eighth-grade posttest California Achievement Test (a) math computation, (b) math concepts and applications, and (c) total math Normal Curve Equivalent scores for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The first pretest-posttest hypothesis was tested using the dependent  $t$  test. As seen in Table 13, null hypotheses were not rejected for the beginning eighth-grade pretest compared to ending eighth-grade posttest California Achievement Test (a) math computation and were rejected for (b) math concepts and applications, and (c) total math Normal Curve Equivalent scores for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The pretest math computation Normal Curve Equivalent score for the at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 41.45$ ,  $SD = 19.66$ ) compared to the posttest math computation Normal Curve Equivalent score ( $M = 41.55$ ,  $SD = 17.49$ ) was not statistically significantly different in the direction of an

improved posttest score,  $t(19) = 0.03, p = .49$  (one-tailed),  $d = 0.007$ . Also found in Table 13 pretest math concepts and applications Normal Curve Equivalent score for the at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 37.50, SD = 15.30$ ) compared to the posttest math concepts and applications Normal Curve Equivalent score ( $M = 44.15, SD = 15.77$ ) was statistically significantly different in the direction of an improved posttest score,  $t(19) = 2.74, p = .01$  (one-tailed),  $d = 0.605$ . Finally, as found in Table 13 pretest math total Normal Curve Equivalent score for the at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 39.00, SD = 16.76$ ) compared to the posttest math total Normal Curve Equivalent score ( $M = 43.05, SD = 16.70$ ) was statistically significantly different in the direction of an improved posttest score,  $t(19) = 1.97, p < .05$  (one-tailed),  $d = 0.428$ .

### **Research Question #8**

Table 14 displays beginning eighth-grade pretest compared to ending eighth-grade posttest California Achievement Test (a) math computation, (b) math concepts and applications, and (c) total math Normal Curve Equivalent scores for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The second pretest-posttest hypothesis was tested using the dependent  $t$  test. As seen in Table 14, null hypotheses were not rejected for the beginning eighth-grade pretest compared to ending eighth-grade posttest California Achievement Test (a) math

computation, (b) math concepts and applications, and (c) total math Normal Curve Equivalent scores for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The pretest math computation Normal Curve Equivalent score for the at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 40.95$ ,  $SD = 12.79$ ) compared to the posttest math computation Normal Curve Equivalent score ( $M = 39.75$ ,  $SD = 12.30$ ) was not statistically significantly different in the direction of an improved posttest score,  $t(19) = -0.42$ ,  $p = .34$  (one-tailed),  $d = -0.094$ . Also found in Table 14 pretest math concepts and applications Normal Curve Equivalent score for the at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 45.00$ ,  $SD = 12.94$ ) compared to the posttest math concepts and applications Normal Curve Equivalent score ( $M = 48.30$ ,  $SD = 16.77$ ) was not statistically significantly different in the direction of an improved posttest score,  $t(19) = 1.35$ ,  $p = .10$  (one-tailed),  $d = 0.321$ . Finally, as found in Table 14 pretest math total Normal Curve Equivalent score for the at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 43.30$ ,  $SD = 11.98$ ) compared to the posttest math total Normal Curve Equivalent score ( $M = 43.55$ ,  $SD = 13.65$ ) was not statistically significantly different in the direction of an improved posttest score,  $t(19) = 0.13$ ,  $p = .13$  (one-tailed),  $d = 0.029$ .

**Research Question #9**

Table 15 displays posttest results of Analysis of Variance (ANOVA) ending eighth-grade posttest compared to ending eighth-grade posttest California Achievement Test math computation Normal Curve Equivalent scores for eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. As seen in Table 15 the null hypothesis was not rejected for the ending eighth-grade posttest compared to ending eighth-grade posttest California Achievement Test math computation Normal Curve Equivalent scores for eighth-grade at risk students who completed ( $M = 41.55$ ,  $SD = 17.49$ ) and refused ( $M = 39.75$ ,  $SD = 12.30$ ) a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative where  $F(1, 38) = 0.14$ ,  $p = .71$ .

Table 16 displays posttest results of ANOVA ending eighth-grade posttest compared to ending eighth-grade posttest California Achievement Test math concepts and applications Normal Curve Equivalent scores for eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. As seen in Table 16 the null hypothesis was not rejected for the ending eighth-grade posttest compared to ending eighth-grade posttest California Achievement Test math concepts and applications Normal Curve Equivalent scores for eighth-grade at risk students who completed ( $M = 44.15$ ,  $SD = 15.77$ ) and refused ( $M = 48.30$ ,  $SD = 16.78$ ) a pre-eighth-grade summer academic enrichment program and participated in a school-



wide, school year long, ownership, mastery, and grading initiative where  $F(1, 38) = 0.65$ ,  $p = .43$ .

Table 17 displays posttest results of ANOVA ending eighth-grade posttest compared to ending eighth-grade posttest California Achievement Test math total Normal Curve Equivalent scores for eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. As seen in Table 17 the null hypothesis was not rejected for the ending eighth-grade posttest compared to ending eighth-grade posttest California Achievement Test math total Normal Curve Equivalent scores for eighth-grade at risk students who completed ( $M = 43.05$ ,  $SD = 16.71$ ) and refused ( $M = 43.55$ ,  $SD = 13.66$ ) a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative where  $F(1, 38) = 0.01$ ,  $p = .92$ .

#### **Research Question #10**

Table 18 displays ending seventh-grade school year core curriculum grades compared to ending eighth-grade school year core curriculum grades (a) reading, (b) language arts, (c) math, (d) science, (e) social studies, and (f) cumulative grade point average for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The first pretest-posttest hypothesis was tested using the dependent  $t$  test. As seen in Table 18, null hypotheses were not rejected for the ending seventh-grade school year core curriculum grades compared to ending eighth-grade school year core curriculum grades for (a) reading, (c) math, (d) science, (e)

social studies, and (f) cumulative grade point average and were rejected for (b) language arts, for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The pretest reading grade for the at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 2.35$ ,  $SD = 0.81$ ) compared to the posttest reading grade ( $M = 2.15$ ,  $SD = 1.13$ ) was not statistically significantly different in the direction of an improved posttest grade,  $t(19) = -0.75$ ,  $p = .23$  (one-tailed),  $d = -0.172$ . Also found in Table 18 the pretest language arts grade for the at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 2.55$ ,  $SD = 0.81$ ) compared to the posttest language arts grade ( $M = 1.80$ ,  $SD = 0.83$ ) was statistically significantly different in the direction of a lower posttest grade,  $t(19) = -3.00$ ,  $p < .01$  (one-tailed),  $d = -0.673$ . Also found in Table 18 the pretest math grade for the at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 2.65$ ,  $SD = 0.81$ ) compared to the posttest math grade ( $M = 2.60$ ,  $SD = 0.67$ ) was not statistically significantly different in the direction of an improved posttest grade,  $t(19) = -0.33$ ,  $p = .37$  (one-tailed),  $d = -0.074$ . Also found in Table 18 the pretest science grade for the at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 1.85$ ,  $SD = 0.67$ )

compared to the posttest science grade ( $M = 2.00$ ,  $SD = 0.86$ ) was not statistically significantly different in the direction of an improved posttest grade,  $t(19) = 0.77$ ,  $p = .23$  (one-tailed),  $d = 0.173$ . Also found in Table 18 the pretest social studies grade for the at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 2.00$ ,  $SD = 0.79$ ) compared to the posttest social studies grade ( $M = 2.30$ ,  $SD = 0.73$ ) was not statistically significantly different in the direction of an improved posttest grade,  $t(19) = 1.37$ ,  $p = .09$  (one-tailed),  $d = 0.308$ . Finally, as found in Table 18 the pretest cumulative grade point average for the at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 2.34$ ,  $SD = 0.51$ ) compared to the posttest cumulative grade point average ( $M = 2.50$ ,  $SD = 0.50$ ) was not statistically significantly different in the direction of an improved cumulative grade point average,  $t(19) = 1.35$ ,  $p = .10$  (one-tailed),  $d = 0.294$ .

### **Research Question #11**

Table 19 displays ending seventh-grade school year core curriculum grades compared to ending eighth-grade school year core curriculum grades (a) reading, (b) language arts, (c) math, (d) science, (e) social studies, and (f) cumulative grade point average for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The second pretest-posttest hypothesis was tested using the dependent  $t$  test. As seen in Table 19, null hypotheses were not rejected

for the ending seventh-grade school year core curriculum grades compared to ending eighth-grade school year core curriculum grades for (a) reading, (c) math, (e) social studies, and (f) cumulative grade point average and were rejected for (b) language arts and (d) science, for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The pretest reading grade for the at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 2.65$ ,  $SD = 0.74$ ) compared to the posttest reading grade ( $M = 2.70$ ,  $SD = 0.97$ ) was not statistically significantly different in the direction of an improved posttest grade,  $t(19) = -0.16$ ,  $p = .44$  (one-tailed),  $d = 0.049$ . Also found in Table 19 the pretest language arts grade for the at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 3.05$ ,  $SD = 0.68$ ) compared to the posttest language arts grade ( $M = 2.25$ ,  $SD = 0.71$ ) was statistically significantly different in the direction of a lower posttest grade,  $t(19) = -3.76$ ,  $p = .001$  (one-tailed),  $d = -0.849$ . Also found in Table 19 the pretest math grade for the at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 2.95$ ,  $SD = 0.68$ ) compared to the posttest math grade ( $M = 2.85$ ,  $SD = 0.87$ ) was not statistically significantly different in the direction of an improved posttest grade,  $t(19) = -0.62$ ,  $p = .27$  (one-tailed),  $d = -0.144$ . Also found in Table 19 the pretest science grade for the at risk eighth-grade students who refused a pre-eighth-grade

summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 1.95$ ,  $SD = 0.88$ ) compared to the posttest science grade ( $M = 2.45$ ,  $SD = 0.76$ ) was statistically significantly different in the direction of an improved posttest grade,  $t(19) = 2.70$ ,  $p = .01$  (one-tailed),  $d = 0.610$ .

Also found in Table 19 the pretest social studies grade for the at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 2.50$ ,  $SD = 0.76$ ) compared to the posttest social studies grade ( $M = 2.55$ ,  $SD = 0.82$ ) was not statistically significantly different in the direction of an improved posttest grade,  $t(19) = 0.37$ ,  $p = .36$  (one-tailed),  $d = 0.083$ . Finally, as found in Table 19 the pretest cumulative grade point average for the at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 2.72$ ,  $SD = 0.64$ ) compared to the posttest cumulative grade point average ( $M = 2.77$ ,  $SD = 0.51$ ) was not statistically significantly different in the direction of an improved cumulative grade point average,  $t(19) = 0.46$ ,  $p = .33$  (one-tailed),  $d = 0.104$ .

### **Research Question #12**

Table 20 displays posttest results of Analysis of Variance (ANOVA) ending eighth-grade school year core curriculum grades in reading compared to ending eighth-grade school year core curriculum grades in reading for eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. As seen in Table 20 the null hypothesis was not rejected for the ending eighth-

grade school year core curriculum grades in reading for eighth-grade at risk students who completed ( $M = 2.15$ ,  $SD = 1.14$ ) and refused ( $M = 2.70$ ,  $SD = 0.98$ ) a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative where  $F(1, 38) = 2.69$ ,  $p = .11$ .

Table 21 displays posttest results of ANOVA ending eighth-grade school year core curriculum grades in language arts compared to ending eighth-grade school year core curriculum grades in language arts for eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. As seen in Table 21 the null hypothesis was not rejected for the ending eighth-grade school year core curriculum grades in language arts for eighth-grade at risk students who completed ( $M = 1.80$ ,  $SD = 0.83$ ) and refused ( $M = 2.25$ ,  $SD = 0.72$ ) a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative where  $F(1, 38) = 3.35$ ,  $p = .07$ .

Table 22 displays posttest results of ANOVA ending eighth-grade school year core curriculum grades in math compared to ending eighth-grade school year core curriculum grades in math for eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. As seen in Table 22 the null hypothesis was not rejected for the ending eighth-grade school year core curriculum grades in math for eighth-grade at risk students who completed ( $M = 2.60$ ,  $SD = 0.68$ ) and refused ( $M = 2.85$ ,  $SD = 0.88$ ) a pre-eighth-grade summer academic

enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative where  $F(1, 38) = 1.02, p = .32$ .

Table 23 displays posttest results of ANOVA ending eighth-grade school year core curriculum grades in science compared to ending eighth-grade school year core curriculum grades in science for eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. As seen in Table 23 the null hypothesis was not rejected for the ending eighth-grade school year core curriculum grades in science for eighth-grade at risk students who completed ( $M = 2.00, SD = 0.86$ ) and refused ( $M = 2.45, SD = 0.76$ ) a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative where  $F(1, 38) = 3.08, p = .09$ .

Table 24 displays posttest results of ANOVA ending eighth-grade school year core curriculum grades in social studies compared to ending eighth-grade school year core curriculum grades in social studies for eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. As seen in Table 24 the null hypothesis was not rejected for the ending eighth-grade school year core curriculum grades in social studies for eighth-grade at risk students who completed ( $M = 2.30, SD = 0.73$ ) and refused ( $M = 2.55, SD = 0.83$ ) a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative where  $F(1, 38) = 1.03, p = .32$ .

Table 25 displays posttest results of ANOVA ending eighth-grade school year cumulative grade point average compared to ending eighth-grade school year cumulative grade point average for eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. As seen in Table 25 the null hypothesis was not rejected for the ending eighth-grade school year cumulative grade point average for eighth-grade at risk students who completed ( $M = 2.50$ ,  $SD = 0.50$ ) and refused ( $M = 2.77$ ,  $SD = 0.52$ ) a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative where  $F(1, 38) = 2.70$ ,  $p = .11$ .

### **Research Question #13**

Table 26 displays beginning eighth-grade pretest Fall Building Writing Assessment (FBWA) scores compared to ending eighth-grade posttest Spring State Writing Assessment (SSWA) scores for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The first pretest-posttest hypothesis was tested using the dependent  $t$  test. As seen in Table 26, null hypotheses were rejected for the beginning eighth-grade pretest FBWA scores compared to ending eighth-grade posttest SSWA scores for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The pretest FBWA scores for the at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year



long, ownership, mastery, and grading initiative ( $M = 4.30$ ,  $SD = 1.17$ ) compared to the posttest SSWA scores ( $M = 5.40$ ,  $SD = 0.99$ ) were statistically significantly different in the direction of an improved posttest score,  $t(19) = 3.58$ ,  $p = .001$  (one-tailed),  $d = 0.805$ .

#### **Research Question #14**

Table 27 displays beginning eighth-grade pretest FBWA scores compared to ending eighth-grade posttest SSWA scores for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The second pretest-posttest hypothesis was tested using the dependent  $t$  test. As seen in Table 27, null hypotheses were rejected for the beginning eighth-grade pretest FBWA scores compared to ending eighth-grade posttest SSWA scores for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The pretest FBWA scores for the at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 4.45$ ,  $SD = 1.84$ ) compared to the posttest SSWA scores ( $M = 5.35$ ,  $SD = 0.98$ ) were statistically significantly different in the direction of an improved posttest score,  $t(19) = 2.27$ ,  $p < .05$  (one-tailed),  $d = 0.556$ .

#### **Research Question #15**

Table 28 displays posttest results of Analysis of Variance (ANOVA) ending eighth-grade posttest compared to ending eighth-grade posttest SSWA scores for eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership,

mastery, and grading initiative. As seen in Table 28 the null hypothesis was not rejected for the ending eighth-grade posttest compared to ending eighth-grade posttest SSWA scores for eighth-grade at risk students who completed ( $M = 5.40$ ,  $SD = 0.99$ ) and refused ( $M = 5.35$ ,  $SD = 0.99$ ) a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative where  $F(1, 38) = 0.03$ ,  $p = .87$ .

### **Research Question #16**

Research question #16 was analyzed using chi-square ( $X^2$ ). The results of  $X^2$  were displayed in Table 29 for ending eighth-grade school year athletic and activities cumulative participation frequencies for eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. As seen in Table 29 ending eighth-grade school year athletic and activities cumulative participation frequencies for eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative was not significantly different  $X^2(1, N = 116) = 0.124$ ,  $p = .724$  so the null hypothesis of no difference or congruence for the posttest compared to posttest ending eighth-grade school year athletic and activities cumulative participation frequencies was not rejected.

### **Research Question #17**

Table 30 displays ending seventh-grade school year cumulative behavior compared to ending eighth-grade school year cumulative behavior (a) absences, (b) tardies, and (c) discipline for at risk eighth-grade students who completed a pre-eighth-

grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The first pretest-posttest hypothesis was tested using the dependent  $t$  test. As seen in Table 30, null hypotheses were not rejected for the ending seventh-grade school year cumulative behavior compared to ending eighth-grade school year cumulative behavior (a) absences, (b) tardies, and (c) discipline for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The pretest ending seventh-grade school year cumulative absences for the at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 9.65$ ,  $SD = 6.67$ ) compared to the posttest ending eighth-grade school year cumulative absences ( $M = 9.30$ ,  $SD = 5.29$ ) was not statistically significantly different in the direction of improved cumulative absences,  $t(19) = -0.29$ ,  $p = .39$  (one-tailed),  $d = -0.065$ . Also found in Table 30 pretest ending seventh-grade school year cumulative tardies for the at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 5.40$ ,  $SD = 7.47$ ) compared to the posttest ending eighth-grade school year cumulative tardies ( $M = 8.00$ ,  $SD = 14.64$ ) was not statistically significantly different in the direction of an improved cumulative tardies,  $t(19) = 0.81$ ,  $p = .21$  (one-tailed),  $d = 0.197$ . Finally, as found in Table 30 pretest ending seventh-grade school year cumulative discipline for the at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long,

ownership, mastery, and grading initiative ( $M = 3.90$ ,  $SD = 3.58$ ) compared to the posttest ending eighth-grade school year cumulative discipline ( $M = 4.80$ ,  $SD = 4.67$ ) was not statistically significantly different in the direction of an improved cumulative discipline,  $t(19) = 1.06$ ,  $p = .15$  (one-tailed),  $d = 0.239$ .

### **Research Question #18**

Table 31 displays ending seventh-grade school year cumulative behavior compared to ending eighth-grade school year cumulative behavior (a) absences, (b) tardies, and (c) discipline for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The second pretest-posttest hypothesis was tested using the dependent  $t$  test. As seen in Table 31, null hypotheses were rejected for the ending seventh-grade school year cumulative behavior compared to ending eighth-grade school year cumulative behavior (a) absences and were not rejected for (b) tardies and (c) discipline for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. The pretest ending seventh-grade school year cumulative absences for the at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 6.75$ ,  $SD = 5.87$ ) compared to the posttest ending eighth-grade school year cumulative absences ( $M = 8.90$ ,  $SD = 6.47$ ) was statistically significantly different in the direction of increased cumulative absences,  $t(19) = 1.99$ ,  $p < .03$  (one-tailed),  $d = 0.443$ . Also found in Table 31 pretest ending seventh-grade school year cumulative tardies for the at risk eighth-

grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 2.75$ ,  $SD = 4.44$ ) compared to the posttest ending eighth-grade school year cumulative tardies ( $M = 5.85$ ,  $SD = 9.99$ ) was not statistically significantly different in the direction of improved cumulative tardies,  $t(19) = 1.49$ ,  $p = .08$  (one-tailed),  $d = 0.380$ . Finally, as found in Table 31 pretest ending seventh-grade school year cumulative discipline for the at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative ( $M = 4.35$ ,  $SD = 4.17$ ) compared to the posttest ending eighth-grade school year cumulative discipline ( $M = 4.65$ ,  $SD = 4.33$ ) was not statistically significantly different in the direction of improved cumulative discipline,  $t(19) = 0.46$ ,  $p = .33$  (one-tailed),  $d = 0.102$ .

### **Research Question #19**

Table 32 displays posttest results of Analysis of Variance (ANOVA) ending eighth-grade school year cumulative absences compared to ending eighth-grade school year cumulative absences for eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. As seen in Table 32 the null hypothesis was not rejected for the ending eighth-grade school year cumulative absences compared to ending eighth-grade school year cumulative absences for eighth-grade at risk students who completed ( $M = 9.30$ ,  $SD = 5.29$ ) and refused ( $M = 8.90$ ,  $SD = 6.48$ ) a pre-eighth-grade summer academic enrichment program and participated in a

school-wide, school year long, ownership, mastery, and grading initiative where  $F(1, 38) = 0.05, p = .83$ .

Table 33 displays posttest results of ANOVA ending eighth-grade school year cumulative tardies compared to ending eighth-grade school year cumulative tardies for eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. As seen in Table 33 the null hypothesis was not rejected for the ending eighth-grade school year cumulative tardies compared to ending eighth-grade school year cumulative tardies for eighth-grade at risk students who completed ( $M = 8.00, SD = 14.65$ ) and refused ( $M = 5.85, SD = 9.99$ ) a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative where  $F(1, 38) = 0.29, p = .59$ .

Table 34 displays posttest results of ANOVA ending eighth-grade school year cumulative discipline compared to ending eighth-grade school year cumulative discipline for eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative. As seen in Table 34 the null hypothesis was not rejected for the ending eighth-grade school year cumulative discipline compared to ending eighth-grade school year cumulative discipline for eighth-grade at risk students who completed ( $M = 4.80, SD = 4.37$ ) and refused ( $M = 4.65, SD = 4.33$ ) a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative where  $F(1, 38) = 0.48, p = .49$ .

Table 1

*Demographic Information of Individual Eighth-Grade Students At risk Who Completed a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Student Number	Gender	Ethnicity	Free or Reduced Price Lunch Program	Special Education
1.	Male	Hispanic	No	Yes
2.	Male	African-American	Yes	Yes
3.	Male	African-American	No	No
4.	Male	African-American	Yes	Yes
5.	Male	Caucasian	Yes	No
6.	Female	Caucasian	No	No
7.	Male	Caucasian	No	No
8.	Male	Caucasian	No	No
9.	Male	African-American	No	No
10.	Male	Asian	No	No
11.	Female	Caucasian	No	No
12.	Male	Caucasian	No	No
13.	Female	African-American	Yes	No
14.	Male	Caucasian	No	No
15.	Female	African-American	Yes	No
16.	Male	Hispanic	Yes	Yes
17.	Male	Caucasian	No	Yes
18.	Male	Hispanic	No	No
19.	Male	Caucasian	No	No
20.	Male	Caucasian	No	No

*Note.* All students were in attendance in the research school district seventh-grade through eighth-grade.

Table 2

*Demographic Information of Individual Eighth-Grade Students At risk Who Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Student Number	Gender	Ethnicity	Free or Reduced Price Lunch Program	Special Education
1.	Male	Caucasian	No	No
2.	Female	African-American	Yes	No
3.	Female	Caucasian	No	No
4.	Female	African-American	Yes	Yes
5.	Male	African-American	Yes	No
6.	Male	African-American	Yes	No
7.	Male	African-American	No	Yes
8.	Male	African-American	Yes	Yes
9.	Female	Hispanic	No	No
10.	Female	African-American	Yes	No
11.	Male	Caucasian	No	No
12.	Female	Native American	No	Yes
13.	Female	Hispanic	Yes	No
14.	Male	Caucasian	Yes	No
15.	Female	Caucasian	No	No
16.	Female	African-American	Yes	No
17.	Male	African-American	Yes	Yes
18.	Male	African-American	Yes	No
19.	Male	Caucasian	No	No
20.	Female	Caucasian	No	Yes

*Note.* All students were in attendance in the research school district seventh-grade through eighth-grade.



Table 3

*Beginning Eighth-Grade Pretest Compared to Ending Eighth-Grade Posttest California Achievement Test (A) Reading Vocabulary, (B) Reading Comprehension, and (C) Total Reading Normal Curve Equivalent Scores for At risk Eighth-Grade Students Who Completed a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source	Normal Curve Equivalent Scores						
	Pretest		Posttest		<i>d</i>	<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
A	38.30	(18.12)	39.45	(22.36)	0.107	0.46	.33 <sup>†</sup>
B	32.75	(16.65)	36.85	(21.62)	0.253	1.09	.14 <sup>†</sup>
C	35.55	(15.67)	37.40	(21.15)	0.163	0.67	.26 <sup>†</sup>

*Note.* A = Reading Vocabulary; B = Reading Comprehension; and C = Total Reading.  
<sup>†</sup>*ns.*

Table 4

*Beginning Eighth-Grade Pretest Compared to Ending Eighth-Grade Posttest California Achievement Test (A) Reading Vocabulary, (B) Reading Comprehension, and (C) Total Reading Normal Curve Equivalent Scores for Eighth-Grade At risk Students Who Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source	Normal Curve Equivalent Scores						
	Pretest		Posttest		<i>d</i>	<i>t</i> <sup>a</sup>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
A	39.00	(16.30)	42.65	(16.64)	0.351	1.58	.07 <sup>†</sup>
B	37.20	(14.58)	40.60	(18.24)	0.392	1.65	.06 <sup>†</sup>
C	38.30	(14.19)	41.60	(16.98)	0.473	2.05	.05*

*Note.* A = Reading Vocabulary; B = Reading Comprehension; and C = Total Reading.  
<sup>†</sup>*ns.* \**p* < .05.

Table 5

*Results of Analysis of Variance Ending Eighth-Grade Posttest Compared to Ending Eighth-Grade Posttest California Achievement Test Reading Vocabulary Normal Curve Equivalent Scores for Eighth-Grade At risk Students Who Completed and Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source of Variation	Sum of Squares	Mean Square	<i>df</i>	<i>F</i>	<i>p</i>
Between Groups	102.40	102.40	1	0.26	.61 <sup>†</sup>
Within Groups	14,773.50	388.78	38		

Reading Vocabulary Scores <sup>a</sup>	Mean ( <i>SD</i> )
$\bar{A}$	39.45 (22.37)
$\bar{B}$	42.65 (16.65)

*Note.* A = Eighth-grade at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative; B = Eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative.

<sup>a</sup>CAT Normal Curve Equivalent Scores.

<sup>†</sup>*ns.* No *post hoc* results calculated or displayed.

Table 6

*Results of Analysis of Variance Ending Eighth-Grade Posttest Compared to Ending Eighth-Grade Posttest California Achievement Test Reading Comprehension Normal Curve Equivalent Scores for Eighth-Grade At risk Students Who Completed and Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source of Variation	Sum of Squares	Mean Square	<i>df</i>	<i>F</i>	<i>p</i>
Between Groups	140.62	140.62	1	0.35	.56 <sup>†</sup>
Within Groups	15,207.35	400.19	38		

Reading Comprehension Scores <sup>a</sup>	Mean ( <i>SD</i> )
$\bar{A}$	36.85 (21.62)
$\bar{B}$	40.60 (18.25)

*Note.* A = Eighth-grade at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative; B = Eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative.

<sup>a</sup>CAT Normal Curve Equivalent Scores.

<sup>†</sup>*ns.* No *post hoc* results calculated or displayed.

Table 7

*Results of Analysis of Variance Ending Eighth-Grade Posttest Compared to Ending Eighth-Grade Posttest California Achievement Test Reading Total Normal Curve Equivalent Scores for Eighth-Grade At risk Students Who Completed and Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source of Variation	Sum of Squares	Mean Square	<i>df</i>	<i>F</i>	<i>p</i>
Between Groups	176.40	176.40	1	0.48	.49 <sup>†</sup>
Within Groups	13,981.60	367.94	38		

Reading Total Scores <sup>a</sup>	Mean ( <i>SD</i> )
$\bar{A}$	37.40 (21.15)
$\bar{B}$	41.60 (16.98)

*Note.* A = Eighth-grade at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative; B = Eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative.

<sup>a</sup>CAT Normal Curve Equivalent Scores.

<sup>†</sup>*ns.* No *post hoc* results calculated or displayed.

Table 8

*Beginning Eighth-Grade Pretest Compared to Ending Eighth-Grade Posttest California Achievement Test (A) Language Mechanics, (B) Language Expression, and (C) Total Language Normal Curve Equivalent Scores for At risk Eighth-Grade Students Who Completed a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source	Normal Curve Equivalent Scores						<i>d</i>	<i>t</i> <sup>a</sup>	<i>p</i>
	Pretest		Posttest		<i>M</i>	<i>SD</i>			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>					
A	39.95	(24.89)	41.30	(25.70)	0.080	0.36	.36 <sup>†</sup>		
B	31.90	(22.68)	38.05	(21.64)	0.507	2.30	.02*		
C	35.95	(23.49)	40.05	(22.93)	0.416	1.88	.04*		

*Note.* A = Language Mechanics; B = Language Expression; and C = Total Language.  
<sup>†</sup>*ns.* \**p* < .05.

Table 9

*Beginning Eighth-Grade Pretest Compared to Ending Eighth-Grade Posttest California Achievement Test (A) Language Mechanics, (B) Language Expression, and (C) Total Language Normal Curve Equivalent Scores for At risk Eighth-Grade Students Who Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source	Normal Curve Equivalent Scores						
	Pretest		Posttest		<i>d</i>	<i>t</i> <sup>a</sup>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
A	47.55	(18.59)	50.20	(13.59)	0.209	0.88	.19 <sup>†</sup>
B	34.40	(16.69)	43.50	(21.61)	0.624	2.70	.01**
C	40.15	(17.31)	45.60	(17.71)	0.432	1.95	.03*

*Note.* A = Language Mechanics; B = Language Expression; and C = Total Language.

<sup>†</sup>*ns.* \**p* < .05. \*\**p* = .01.

Table 10

*Results of Analysis of Variance Ending Eighth-Grade Posttest Compared to Ending Eighth-Grade Posttest California Achievement Test Language Mechanics Normal Curve Equivalent Scores for Eighth-Grade At risk Students Who Completed and Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source of Variation	Sum of Squares	Mean Square	<i>df</i>	<i>F</i>	<i>p</i>
Between Groups	792.10	792.10	1	1.87	.18 <sup>†</sup>
Within Groups	16,063.40	422.72	38		

Language Mechanics Scores <sup>a</sup>	Mean ( <i>SD</i> )
$\bar{A}$	41.30 (25.71)
$\bar{B}$	50.20 (13.59)

*Note.* A = Eighth-grade at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative; B = Eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative.

<sup>a</sup>CAT Normal Curve Equivalent Scores.

<sup>†</sup>*ns.* No *post hoc* results calculated or displayed.



Table 11

*Results of Analysis of Variance Ending Eighth-Grade Posttest Compared to Ending Eighth-Grade Posttest California Achievement Test Language Expression Normal Curve Equivalent Scores for Eighth-Grade At risk Students Who Completed and Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source of Variation	Sum of Squares	Mean Square	<i>df</i>	<i>F</i>	<i>p</i>
Between Groups	297.03	297.03	1	0.63	.43 <sup>†</sup>
Within Groups	17,779.95	467.89	38		

Language Expression Scores <sup>a</sup>	Mean ( <i>SD</i> )
$\bar{A}$	38.50 (21.65)
$\bar{B}$	43.50 (21.61)

*Note.* A = Eighth-grade at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative; B = Eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative.

<sup>a</sup>CAT Normal Curve Equivalent Scores.

<sup>†</sup>*ns.* No *post hoc* results calculated or displayed.

Table 12

*Results of Analysis of Variance Ending Eighth-Grade Posttest Compared to Ending Eighth-Grade Posttest California Achievement Test Language Total Normal Curve Equivalent Scores for Eighth-Grade At risk Students Who Completed and Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source of Variation	Sum of Squares	Mean Square	<i>df</i>	<i>F</i>	<i>p</i>
Between Groups	308.02	308.02	1	0.73	.40 <sup>†</sup>
Within Groups	15,951.75	419.78	38		

Language Total Scores <sup>a</sup>	Mean ( <i>SD</i> )
$\bar{A}$	40.05 (22.93)
$\bar{B}$	45.60 (17.71)

*Note.* A = Eighth-grade at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative; B = Eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative.

<sup>a</sup>CAT Normal Curve Equivalent Scores.

<sup>†</sup>*ns.* No *post hoc* results calculated or displayed.

Table 13

*Beginning Eighth-Grade Pretest Compared to Ending Eighth-Grade Posttest California Achievement Test (A) Math Computation, (B) Math Concepts and Applications, and (C) Total Math Normal Curve Equivalent Scores for At risk Eighth-Grade Students Who Completed a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source	Normal Curve Equivalent Scores						$t^a$	$p$
	Pretest		Posttest		$d$			
	$M$	$SD$	$M$	$SD$				
A	41.45	(19.66)	41.55	(17.49)	0.007	0.03	.49 <sup>†</sup>	
B	37.50	(15.30)	44.15	(15.77)	0.605	2.74	.01**	
C	39.00	(16.76)	43.05	(16.70)	0.428	1.97	.03*	

*Note.* A = Math Computation; B = Math Concepts and Applications; and C = Total Math.

<sup>†</sup>*ns.* \* $p < .05$ . \*\* $p = .01$ .

Table 14

*Beginning Eighth-Grade Pretest Compared to Ending Eighth-Grade Posttest California Achievement Test (A) Math Computation, (B) Math Concepts and Applications, and (C) Total Math Normal Curve Equivalent Scores for At risk Eighth-Grade Students Who Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source	Normal Curve Equivalent Scores						
	Pretest		Posttest		<i>d</i>	<i>t</i> <sup>a</sup>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
A	40.95	(12.79)	39.75	(12.30)	- 0.094	- 0.42	.34 <sup>†</sup>
B	45.00	(12.94)	48.30	(16.77)	0.321	1.35	.10 <sup>†</sup>
C	43.30	(11.98)	43.55	(13.65)	0.029	0.13	.13 <sup>†</sup>

*Note.* A = Math Computation; B = Math Concepts and Applications; and C = Total Math.

<sup>†</sup>*ns.*

Table 15

*Results of Analysis of Variance Ending Eighth-Grade Posttest Compared to Ending Eighth-Grade Posttest California Achievement Test Math Computation Normal Curve Equivalent Scores for Eighth-Grade At risk Students Who Completed and Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source of Variation	Sum of Squares	Mean Square	<i>df</i>	<i>F</i>	<i>p</i>
Between Groups	32.40	32.40	1	0.14	.71 <sup>†</sup>
Within Groups	8688.70	228.65	38		

Math Computation Scores <sup>a</sup>	Mean ( <i>SD</i> )
$\bar{A}$	41.55 (17.49)
$\bar{B}$	39.75 (12.30)

*Note.* A = Eighth-grade at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative; B = Eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative.

<sup>a</sup>CAT Normal Curve Equivalent Scores.

<sup>†</sup>*ns.* No *post hoc* results calculated or displayed.

Table 16

*Results of Analysis of Variance Ending Eighth-Grade Posttest Compared to Ending Eighth-Grade Posttest California Achievement Test Math Concepts and Applications Normal Curve Equivalent Scores for Eighth-Grade At risk Students Who Completed and Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source of Variation	Sum of Squares	Mean Square	<i>df</i>	<i>F</i>	<i>p</i>
Between Groups	172.23	172.23	1	0.65	.43 <sup>†</sup>
Within Groups	10074.75	265.13	38		
Math Concepts and Applications Scores <sup>a</sup>		Mean ( <i>SD</i> )			
	$\bar{A}$	44.15 (15.77)			
	$\bar{B}$	48.30 (16.78)			

*Note.* A = Eighth-grade at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative; B = Eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative.

<sup>a</sup>CAT Normal Curve Equivalent Scores.

<sup>†</sup>*ns.* No *post hoc* results calculated or displayed.

Table 17

*Results of Analysis of Variance Ending Eighth-Grade Posttest Compared to Ending Eighth-Grade Posttest California Achievement Test Math Total Normal Curve Equivalent Scores for Eighth-Grade At risk Students Who Completed and Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source of Variation	Sum of Squares	Mean Square	<i>df</i>	<i>F</i>	<i>p</i>
Between Groups	2.50	2.50	1	0.01	.92 <sup>†</sup>
Within Groups	8847.90	232.84	38		

Math Total Scores <sup>a</sup>	Mean ( <i>SD</i> )
$\bar{A}$	43.05 (16.71)
$\bar{B}$	43.55 (13.66)

*Note.* A = Eighth-grade at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative; B = Eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative.

<sup>a</sup>CAT Normal Curve Equivalent Scores.

<sup>†</sup>*ns.* No *post hoc* results calculated or displayed.

Table 18

*Ending Seventh-Grade School Year Core Curriculum Grades Compared to Ending Eighth-Grade School Year Core Curriculum Grades (A) Reading, (B) Language Arts, (C) Math, (D) Science, (E) Social Studies, and (F) Cumulative Grade Point Average for At risk Eighth-Grade Students Who Completed a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source	Core Curriculum Grades and Cumulative Grade Point Average							
	Pretest		Posttest		<i>d</i>	<i>t</i> <sup>a</sup>	<i>p</i>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
A	2.35	(0.81)	2.15	(1.13)	- 0.172	- 0.75	.23 <sup>†</sup>	
B	2.55	(0.88)	1.80	(0.83)	- 0.673	- 3.00	.004**	
C	2.65	(0.81)	2.60	(0.67)	- 0.074	- 0.33	.37 <sup>†</sup>	
D	1.85	(0.67)	2.00	(0.86)	0.173	0.77	.23 <sup>†</sup>	
E	2.00	(0.79)	2.30	(0.73)	0.308	1.37	.09 <sup>†</sup>	
F	2.34	(0.51)	2.50	(0.50)	0.294	1.35	.10 <sup>†</sup>	

*Note.* A = Reading Grade; B = Language Arts Grade; C = Math Grade; D = Science Grade; E = Social Studies Grade; and F = Cumulative Grade Point Average.

<sup>†</sup>*ns.* \*\**p* < .01.



Table 19

*Ending Seventh-Grade School Year Core Curriculum Grades Compared to Ending Eighth-Grade School Year Core Curriculum Grades (A) Reading, (B) Language Arts, (C) Math, (D) Science, (E) Social Studies, and (F) Cumulative Grade Point Average for At risk Eighth-Grade Students Who Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Core Curriculum Grades and Cumulative Grade Point Average							
Source	Pretest		Posttest		<i>d</i>	<i>t</i> <sup>a</sup>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
A	2.65	(0.74)	2.70	(0.97)	0.049	0.16	.44 <sup>†</sup>
B	3.05	(0.68)	2.25	(0.71)	- 0.849	- 3.76	.001***
C	2.95	(0.68)	2.85	(0.87)	- 0.144	- 0.62	.27 <sup>†</sup>
D	1.95	(0.88)	2.45	(0.76)	0.610	2.70	.01**
E	2.50	(0.76)	2.55	(0.82)	0.083	0.37	.36 <sup>†</sup>
F	2.72	(0.64)	2.77	(0.51)	0.104	0.46	.33 <sup>†</sup>

*Note.* A = Reading Grade; B = Language Arts Grade; C = Math Grade; D = Science Grade; E = Social Studies Grade; and F = Cumulative Grade Point Average.  
<sup>†</sup>*ns.* \*\**p* = .01. \*\*\**p* = .001.

Table 20

*Results of Analysis of Variance Ending Eighth-Grade School Year Core Curriculum Grades in Reading Compared to Ending Eighth-Grade School Year Core Curriculum Grades in Reading for Eighth-Grade At risk Students Who Completed and Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source of Variation	Sum of Squares	Mean Square	<i>df</i>	<i>F</i>	<i>p</i>
Between Groups	3.03	3.03	1	2.69	.11 <sup>†</sup>
Within Groups	42.75	1.13	38		

Reading Grades	Mean	( <i>SD</i> )
$\bar{A}$	2.15	(1.14)
$\bar{B}$	2.70	(0.98)

*Note.* A = Eighth-grade at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative; B = Eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative.

<sup>†</sup>*ns.* No *post hoc* results calculated or displayed.

Table 21

*Results of Analysis of Variance Ending Eighth-Grade School Year Core Curriculum Grades in Language Arts Compared to Ending Eighth-Grade School Year Core Curriculum Grades in Language Arts for Eighth-Grade At risk Students Who Completed and Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source of Variation	Sum of Squares	Mean Square	<i>df</i>	<i>F</i>	<i>p</i>
Between Groups	2.03	2.03	1	3.35	.07 <sup>†</sup>
Within Groups	22.95	0.60	38		

Language Arts Grades	Mean	(SD)
$\bar{A}$	1.80	(0.83)
$\bar{B}$	2.25	(0.72)

*Note.* A = Eighth-grade at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative; B = Eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative.

<sup>†</sup>*ns.* No *post hoc* results calculated or displayed.

Table 22

*Results of Analysis of Variance Ending Eighth-Grade School Year Core Curriculum Grades in Math Compared to Ending Eighth-Grade School Year Core Curriculum Grades in Math for Eighth-Grade At risk Students Who Completed and Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source of Variation	Sum of Squares	Mean Square	<i>df</i>	<i>F</i>	<i>p</i>
Between Groups	0.63	0.63	1	1.02	.32 <sup>†</sup>
Within Groups	23.35	0.61	38		

Math Grades	Mean	(SD)
$\bar{A}$	2.60	(0.68)
$\bar{B}$	2.85	(0.88)

*Note.* A = Eighth-grade at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative; B = Eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative.

<sup>†</sup>*ns.* No *post hoc* results calculated or displayed.

Table 23

*Results of Analysis of Variance Ending Eighth-Grade School Year Core Curriculum Grades in Science Compared to Ending Eighth-Grade School Year Core Curriculum Grades in Science for Eighth-Grade At risk Students Who Completed and Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source of Variation	Sum of Squares	Mean Square	<i>df</i>	<i>F</i>	<i>p</i>
Between Groups	2.03	2.03	1	3.08	.09 <sup>†</sup>
Within Groups	24.95	0.66	38		

Science Grades	Mean	( <i>SD</i> )
$\bar{A}$	2.00	(0.86)
$\bar{B}$	2.45	(0.76)

*Note.* A = Eighth-grade at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative; B = Eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative.

<sup>†</sup>*ns.* No *post hoc* results calculated or displayed.

Table 24

*Results of Analysis of Variance Ending Eighth-Grade School Year Core Curriculum Grades in Social Studies Compared to Ending Eighth-Grade School Year Core Curriculum Grades in Social Studies for Eighth-Grade At risk Students Who Completed and Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source of Variation	Sum of Squares	Mean Square	<i>df</i>	<i>F</i>	<i>p</i>
Between Groups	0.63	0.63	1	1.03	.32 <sup>†</sup>
Within Groups	23.15	0.61	38		
Social Studies Grades	Mean (SD)				
$\bar{A}$	2.30 (0.73)				
$\bar{B}$	2.55 (0.83)				

*Note.* A = Eighth-grade at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative; B = Eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative.

<sup>†</sup>*ns.* No *post hoc* results calculated or displayed.

Table 25

*Results of Analysis of Variance Ending Eighth-Grade School Year Cumulative Grade Point Average Compared to Ending Eighth-Grade School Year Cumulative Grade Point Average for Eighth-Grade At risk Students Who Completed and Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source of Variation	Sum of Squares	Mean Square	<i>df</i>	<i>F</i>	<i>p</i>
Between Groups	0.70	0.70	1	2.70	.11 <sup>†</sup>
Within Groups	9.87	0.26	38		

Cumulative Grade Point Average	Mean ( <i>SD</i> )
$\bar{A}$	2.50 (0.50)
$\bar{B}$	2.77 (0.52)

*Note.* A = Eighth-grade at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative; B = Eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative.

<sup>†</sup>*ns.* No *post hoc* results calculated or displayed.

Table 26

*Beginning Eighth-Grade Pretest Fall Building Writing Assessment (FBWA) Scores Compared to Ending Eighth-Grade Posttest Spring State Writing Assessment (SSWA) Scores for At risk Eighth-Grade Students Who Completed a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source	Writing Assessment						
	Pretest FBWA		Posttest SSWA		<i>d</i>	<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Writing Scores	4.30	(1.17)	5.40	(0.99)	0.805	3.58	.001***

\*\*\**p* = .001.



Table 27

*Beginning Eighth-Grade Pretest Fall Building Writing Assessment (FBWA) Scores Compared to Ending Eighth-Grade Posttest Spring State Writing Assessment (SSWA) Scores for At risk Eighth-Grade Students Who Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source	Writing Assessment						
	Pretest FBWA		Posttest SSWA		<i>d</i>	<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Writing Scores	4.45	(1.84)	5.35	(0.98)	0.556	2.27	.02*

\* $p < .05$ .

Table 28

*Ending Eighth-Grade Posttest Compared to Ending Eighth-Grade Posttest Spring State Writing Assessment (SSWA) Scores for At risk Eighth-Grade Students Who Completed and Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source of Variation	Sum of Squares	Mean Square	<i>df</i>	<i>F</i>	<i>p</i>
Between Groups	0.03	0.03	1	0.03	.87 <sup>†</sup>
Within Groups	37.35	0.98	38		
Writing Scores	Mean (SD)				
$\bar{A}$	5.40 (0.99)				
$\bar{B}$	5.35 (0.99)				

*Note.* A = Eighth-grade at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative; B = Eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative.

<sup>†</sup>*ns.* No *post hoc* results calculated or displayed.

Table 29

*Results of Chi-Square Ending Eighth-Grade School Year Athletic and Activities Cumulative Participation Frequencies for Eighth-Grade At risk Students Who Completed and Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Athletic and Activities Cumulative Participation Frequencies						
Grade Score	At risk Students Who Refused Pre-Eighth-Grade Summer Academic Enrichment Program		At risk Students Who Accepted Pre-Eighth-Grade Summer Academic Enrichment Program		$X^2$	$p$
	$N$	%	$N$	%		
2007 School Year	25	(42)	26	(46)		
2008 School Year	34	(58)	31	(54)		
Totals	59	(100)	57	(100)	0.124	.724 <sup>at</sup>

<sup>a</sup>Observed verses expected cell frequencies used for calculation with  $df = 1$  and a tabled value = 6.635 required to obtain an alpha level of .01, the threshold for statistical significance for this research question.

<sup>t</sup>*ns.*

Table 30

*Ending Seventh-Grade School Year Cumulative Behavior Compared to Ending Eighth-Grade School Year Cumulative Behavior (A) Absences, (B) Tardies, and (C) Discipline for At risk Eighth-Grade Students Who Completed a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source	Cumulative Behavior						
	Pretest		Posttest		<i>d</i>	<i>t</i> <sup>a</sup>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
A	9.65	(6.67)	9.30	(5.29)	- 0.065	- 0.29	.39 <sup>†</sup>
B	5.40	(7.47)	8.00	(14.64)	0.197	0.81	.21 <sup>†</sup>
C	3.90	(3.58)	4.80	(4.67)	0.239	1.06	.15 <sup>†</sup>

*Note.* A = Absences; B = Tardies; and C = Discipline.

<sup>a</sup>Negative *t* result is in the direction of cumulative behavior improvement.

<sup>†</sup>*ns.*

Table 31

*Ending Seventh-Grade School Year Cumulative Behavior Compared to Ending Eighth-Grade School Year Cumulative Behavior (A) Absences, (B) Tardies, and (C) Discipline for At risk Eighth-Grade Students Who Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source	Cumulative Behavior						<i>d</i>	<i>t</i> <sup>a</sup>	<i>p</i>
	Pretest		Posttest						
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>					
A	6.75	(5.87)	8.90	(6.47)	0.443	1.99	.03*		
B	2.75	(4.44)	5.85	(9.99)	0.380	1.49	.08 <sup>†</sup>		
C	4.35	(4.17)	4.65	(4.33)	0.102	0.46	.33 <sup>†</sup>		

*Note.* A = Absences; B = Tardies; and C = Discipline.

<sup>a</sup>Negative *t* result is in the direction of cumulative behavior improvement.

\**p* < .05. <sup>†</sup>*ns*.

Table 32

*Results of Analysis of Variance Ending Eighth-Grade School Year Cumulative Absences Compared to Ending Eighth-Grade School Year Cumulative Absences for Eighth-Grade At risk Students Who Completed and Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source of Variation	Sum of Squares	Mean Square	<i>df</i>	<i>F</i>	<i>p</i>
Between Groups	1.60	1.60	1	0.05	.83 <sup>†</sup>
Within Groups	1330.00	35.00	38		

Absences	Mean	( <i>SD</i> )
$\bar{A}$	9.30	(5.29)
$\bar{B}$	8.90	(6.48)

*Note.* A = Eighth-grade at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative; B = Eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative.

<sup>†</sup>*ns.* No *post hoc* results calculated or displayed.

Table 33

*Results of Analysis of Variance Ending Eighth-Grade School Year Cumulative Tardies Compared to Ending Eighth-Grade School Year Cumulative Tardies for Eighth-Grade At risk Students Who Completed and Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source of Variation	Sum of Squares	Mean Square	<i>df</i>	<i>F</i>	<i>p</i>
Between Groups	46.23	46.23	1	0.29	.59 <sup>†</sup>
Within Groups	5972.55	157.17	38		

Tardies	Mean ( <i>SD</i> )
$\bar{A}$	8.00 (14.65)
$\bar{B}$	5.85 (9.99)

*Note.* A = Eighth-grade at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative; B = Eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative.

<sup>†</sup>*ns.* No *post hoc* results calculated or displayed.

Table 34

*Results of Analysis of Variance Ending Eighth-Grade School Year Cumulative Discipline Compared to Ending Eighth-Grade School Year Cumulative Discipline for Eighth-Grade At risk Students Who Completed and Refused a Pre-Eighth-Grade Summer Academic Enrichment Program and Participated in a School-Wide, School Year Long, Ownership, Mastery, and Grading Initiative*

Source of Variation	Sum of Squares	Mean Square	<i>df</i>	<i>F</i>	<i>p</i>
Between Groups	0.23	0.23	1	0.01	.91 <sup>†</sup>
Within Groups	719.75	18.94	38		

Discipline	Mean	( <i>SD</i> )
$\bar{A}$	4.80	(4.37)
$\bar{B}$	4.65	(4.33)

*Note.* A = Eighth-grade at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative; B = Eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative.

<sup>†</sup>*ns.* No *post hoc* results calculated or displayed.



## CHAPTER FIVE

### Conclusions and Discussion

The following conclusions may be drawn from the study for each of the nineteen research questions.

#### Research Question #1 Conclusion

Overall, pretest-posttest results indicated beginning eighth-grade pretest compared to ending eighth-grade posttest California Achievement Test (a) reading vocabulary, (b) reading comprehension, and (c) total reading Norm Referenced Test (NRT) Normal Curve Equivalent (NCE) scores for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative were not statistically significantly different in the direction of higher posttest mean achievement NRT NCE test scores for reading vocabulary, reading comprehension, and reading total in the direction of higher although not statistically different posttest mean achievement NRT NCE test scores. Comparing students' posttest NRT NCE reading scores with derived achievement scores for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative puts their performance in perspective. An NRT NCE posttest reading vocabulary mean score of 39.45 is congruent with a Standard Score of 92, a Percentile Rank of 30, a Stanine Score of 4 (the lowest stanine of the average range), and an achievement qualitative description of Average. Comparing students' posttest NRT NCE reading comprehension score with derived achievement scores puts their performance in perspective. An NRT NCE posttest reading

comprehension mean score of 36.85 is congruent with a Standard Score of 90, a Percentile Rank of 25, a Stanine Score of 4 (the lowest stanine of the average range), and an achievement qualitative description of Average. Comparing students' NRT NCE reading total score with derived achievement scores puts their performance in perspective. An NRT NCE posttest reading total mean score of 37.40 is congruent with a Standard Score of 90, a Percentile Rank of 25, a Stanine Score of 4 (the lowest stanine of the average range), and an achievement qualitative description of Average.

Finally, the higher reading vocabulary (+1.15), the higher reading comprehension (+4.10), and the higher reading total (+1.85) pretest compared to posttest mean NRT NCE test scores observed in the three reading achievement areas represents a pattern of improvement that may reflect the impact of participation in the pre-eighth-grade summer academic enrichment program and school-wide, school year long, ownership, mastery, and grading initiative combined for these students.

### **Research Question #2 Conclusion**

Overall, pretest-posttest results indicated beginning eighth-grade pretest compared to ending eighth-grade posttest California Achievement Test (a) reading vocabulary, (b) reading comprehension, and (c) total reading NRT NCE scores for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative were not statistically significantly different in the direction of higher posttest mean achievement NRT NCE test scores for reading vocabulary and reading comprehension and was statistically significantly different in the direction of higher posttest mean achievement NRT NCE test score for reading total. Comparing students'

posttest NRT NCE reading scores with derived achievement scores for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative puts their performance in perspective. An NRT NCE posttest reading vocabulary mean score of 42.65 is congruent with a Standard Score of 94, a Percentile Rank of 34, a Stanine Score of 4 (the lowest stanine of the average range), and an achievement qualitative description of Average. Comparing students' NRT NCE reading comprehension score with derived achievement scores puts their performance in perspective. An NRT NCE posttest reading comprehension mean score of 40.60 is congruent with a Standard Score of 93, a Percentile Rank of 32, a Stanine Score of 4 (the lowest stanine of the average range), and an achievement qualitative description of Average. Comparing students' NRT NCE reading total score with derived achievement scores puts their performance in perspective. An NRT NCE posttest reading total mean score of 41.60 is congruent with a Standard Score of 94, a Percentile Rank of 34, a Stanine Score of 4 (the lowest stanine of the average range), and an achievement qualitative description of Average.

Finally, the higher reading vocabulary (+3.65), the higher reading comprehension (+3.40), and the higher reading total (+3.30) pretest compared to posttest mean NRT NCE test scores observed in the three reading achievement areas represents a pattern of improvement in spite of refusal to participate in the pre-eighth-grade summer academic enrichment program. However, it may be that the higher posttest mean NRT NCE reading scores reflects the effect of participation in the required school-wide, school year long, ownership, mastery, and grading initiative.

**Research Question #3 Conclusion**

Overall, results indicated that eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative did not have statistically different posttest NRT NCE (a) reading vocabulary, (b) reading comprehension, and (c) reading total mean achievement scores. While all posttest NRT NCE scores were in the direction of improvement over time pretest to posttest the posttest ANOVA comparisons were congruent for all reading measures. Compelling is that the eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program had reading scores sufficient for successful classroom participation and independent class assignment completion suggesting that program support over time that resulted in improved achievement test scores came from the required school-wide, school year long, ownership, mastery, and grading initiative.

**Research Question #4 Conclusion**

Overall, pretest-posttest results indicated beginning eighth-grade pretest compared to ending eighth-grade posttest California Achievement Test (a) language mechanics, (b) language expression, and (c) total language NRT NCE scores for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative was not statistically significantly different in the direction of a higher posttest mean achievement NRT NCE test score for language mechanics and was statistically significantly different in the direction of a higher posttest mean achievement NRT NCE test scores for language expression and language total. Comparing students' posttest

NRT NCE language scores with derived achievement scores for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative puts their performance in perspective. An NRT NCE posttest language mechanics mean score of 41.30 is congruent with a Standard Score of 94, a Percentile Rank of 34, a Stanine Score of 4 (the lowest stanine of the average range), and an achievement qualitative description of Average. Comparing students' NRT NCE language expression score with derived achievement scores puts their performance in perspective. An NRT NCE posttest language expression mean score of 38.05 is congruent with a Standard Score of 91, a Percentile Rank of 27, a Stanine Score of 4 (the lowest stanine of the average range), and an achievement qualitative description of Average. Comparing students' NRT NCE language total score with derived achievement scores puts their performance in perspective. An NRT NCE posttest language total mean score of 40.05 is congruent with a Standard Score of 93, a Percentile Rank of 32, a Stanine Score of 4 (the lowest stanine of the average range), and an achievement qualitative description of Average.

Finally, the higher language mechanics (+1.35), the higher language expression (+6.15), and the higher language total (+4.10) pretest compared to posttest mean NRT NCE test scores observed in the three language achievement areas represents a pattern of improvement that may reflect the impact of participation in the pre-eighth-grade summer academic enrichment program and school-wide, school year long, ownership, mastery, and grading initiative combined for these students.

**Research Question #5 Conclusion**

Overall, pretest-posttest results indicated beginning eighth-grade pretest compared to ending eighth-grade posttest California Achievement Test (a) language mechanics, (b) language expression, and (c) total language NRT NCE scores for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative was not statistically significantly different in the direction of a higher posttest mean achievement NRT NCE test score for language mechanics and was statistically significantly different in the direction of a higher posttest mean achievement NRT NCE test scores for language expression and language total. Comparing students' posttest NRT NCE language scores with derived achievement scores for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative puts their performance in perspective. An NRT NCE posttest language mechanics mean score of 50.20 is congruent with a Standard Score of 100, a Percentile Rank of 50, a Stanine Score of 5 (the middle stanine of the average range), and an achievement qualitative description of Average. Comparing students' NRT NCE language expression score with derived achievement scores puts their performance in perspective. An NRT NCE posttest language expression mean score of 43.50 is congruent with a Standard Score of 95, a Percentile Rank of 37, a Stanine Score of 4 (the lowest stanine of the average range), and an achievement qualitative description of Average. Comparing students' NRT NCE language total score with derived achievement scores puts their performance in perspective. An NRT NCE posttest language total mean score

of 45.60 is congruent with a Standard Score of 96, a Percentile Rank of 39, a Stanine Score of 4 (the lowest stanine of the average range), and an achievement qualitative description of Average.

Finally, the higher language mechanics (+2.65), the higher language expression (+9.10), and the higher language total (+5.45) pretest compared to posttest mean NRT NCE test scores observed in the three language achievement areas represents a pattern of improvement in spite of refusal to participate in the pre-eighth-grade summer academic enrichment program. However, it may be that higher posttest mean NRT NCE language scores reflects the effect of participation in the required school-wide, school year long, ownership, mastery, and grading initiative.

#### **Research Question #6 Conclusion**

Overall, results indicated that eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative did not have statistically different posttest NRT NCE (a) language mechanics, (b) language expression, and (c) language total mean achievement scores. While all posttest NRT NCE scores were in the direction of improvement over time pretest to posttest the posttest ANOVA comparisons were congruent for all language arts measures. Compelling is that the eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program had language scores sufficient for successful classroom participation and independent class assignment completion suggesting that program support over time that resulted in improved achievement test scores came from the required school-wide, school year long, ownership, mastery, and grading initiative.

**Research Question #7 Conclusion**

Overall, pretest-posttest results indicated beginning eighth-grade pretest compared to ending eighth-grade posttest California Achievement Test (a) math computation, (b) math concepts and applications, and (c) total math NRT NCE scores for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative was not statistically significantly different in the direction of a higher posttest mean achievement NRT NCE test score for math computation and was statistically significantly different in the direction of higher posttest mean achievement NRT NCE test scores for math concepts and applications and math total. Comparing students' posttest NRT NCE math scores with derived achievement scores for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative puts their performance in perspective. An NRT NCE posttest math computation mean score of 41.55 is congruent with a Standard Score of 94, a Percentile Rank of 34, a Stanine Score of 4 (the lowest stanine of the average range), and an achievement qualitative description of Average. Comparing students' NRT NCE math concepts and applications score with derived achievement scores puts their performance in perspective. An NRT NCE posttest math concepts and applications mean score of 44.15 is congruent with a Standard Score of 95, a Percentile Rank of 37, a Stanine Score of 4 (the lowest stanine of the average range), and an achievement qualitative description of Average. Comparing students' NRT NCE math total score with derived achievement scores puts their performance in perspective. An NRT NCE posttest math total mean score of 43.05



is congruent with a Standard Score of 95, a Percentile Rank of 37, a Stanine Score of 4 (the lowest stanine of the average range), and an achievement qualitative description of Average.

Finally, the higher math computation (+0.10), the higher math concepts and applications (+6.65), and the higher math total (+4.05) pretest compared to posttest mean NRT NCE test scores observed in the three math achievement areas represents a pattern of improvement that may reflect the impact of participation in the pre-eighth-grade summer academic enrichment program and school-wide, school year long, ownership, mastery, and grading initiative combined for these students.

#### **Research Question #8 Conclusion**

Overall, pretest-posttest results indicated beginning eighth-grade pretest compared to ending eighth-grade posttest California Achievement Test (a) math computation, (b) math concepts and applications, and (c) total math NRT NCE scores for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative was not statistically significantly different in the direction of a lower posttest mean achievement NRT NCE test score for math computation and was not statistically significantly different in the direction of higher posttest mean achievement NRT NCE test scores for math concepts and applications and math total. Comparing students' posttest NRT NCE math scores with derived achievement scores for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative puts their performance in perspective. An NRT NCE posttest math computation

mean score of 39.75 is congruent with a Standard Score of 92, a Percentile Rank of 30, a Stanine Score of 4 (the lowest stanine of the average range), and an achievement qualitative description of Average. Comparing students' NRT NCE math concepts and applications score with derived achievement scores puts their performance in perspective. An NRT NCE posttest math concepts and applications mean score of 48.30 is congruent with a Standard Score of 99, a Percentile Rank of 47, a Stanine Score of 5 (the middle stanine of the average range), and an achievement qualitative description of Average. Comparing students' NRT NCE math total score with derived achievement scores puts their performance in perspective. An NRT NCE posttest math total mean score of 43.55 is congruent with a Standard Score of 95, a Percentile Rank of 37, a Stanine Score of 4 (the lowest stanine of the average range), and an achievement qualitative description of Average.

Finally, the lower math computation (-1.20), the higher math concepts and applications (+3.30), and the higher math total (+0.25) pretest compared to posttest mean NRT NCE test scores observed in the three math achievement areas represents a mixed pattern of improvement in spite of refusal to participate in the pre-eighth-grade summer academic enrichment program. However, it may be that higher posttest mean NRT NCE math scores for math concepts and applications and math total reflects the effect of participation in the required school-wide, school year long, ownership, mastery, and grading initiative.

### **Research Question #9 Conclusion**

Overall, results indicated that eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a

school-wide, school year long, ownership, mastery, and grading initiative did not have statistically different posttest NRT NCE (a) math computation, (b) math concepts and applications, and (c) math total mean achievement scores. While posttest NRT NCE scores were in the direction of improvement over time pretest to posttest, except for the math computation score for students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative, the posttest ANOVA comparisons were congruent for math measures. Compelling is that the eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program had math scores sufficient for successful classroom participation and independent class assignment completion suggesting that program support over time that resulted in improved achievement test scores came from the required school-wide, school year long, ownership, mastery, and grading initiative.

#### **Research Question #10 Conclusion**

Ending seventh-grade school year pretest core curriculum grades compared to ending eighth-grade school year posttest core curriculum (a) reading, (b) language arts, (c) math, (d) science, (e) social studies, and (f) cumulative grade point average grade scores for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative indicated overall average classroom performance. The ending seventh-grade school year core curriculum grade for reading compared to ending eighth-grade school year core curriculum grade for reading was not statistically different in the direction of a lower posttest compared to pretest core

curriculum reading grade. The ending seventh-grade school year core curriculum grade for language arts compared to ending eighth-grade school year core curriculum grade for language arts was statistically different in the direction of a lower posttest compared to pretest core curriculum language arts grade. The ending seventh-grade school year core curriculum grade for math compared to ending eighth-grade school year core curriculum grade for math was not statistically different in the direction of a lower posttest compared to pretest core curriculum math grade. The ending seventh-grade school year core curriculum grade for science compared to ending eighth-grade school year core curriculum grade for science was not statistically different in the direction of an improved posttest compared to pretest core curriculum science grade. The ending seventh-grade school year core curriculum grade for social studies compared to ending eighth-grade school year core curriculum grade for social studies was not statistically different in the direction of an improved posttest compared to pretest core curriculum social studies grade. The ending seventh-grade school year cumulative grade point average compared to ending eighth-grade school year cumulative grade point average was not statistically different in the direction of an improved posttest compared to pretest cumulative grade point average. Comparing students' posttest core curriculum reading grades with grade score nomenclature for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative puts their performance in perspective. A posttest core curriculum reading grade of 2.15 is congruent with a letter grade of "C" and a qualitative description of Average. Comparing students' posttest core curriculum language arts grades with grade score nomenclature puts their performance in

perspective. A posttest core curriculum language arts grade of 1.80 is congruent with a letter grade of “D” and a qualitative description of Below Average. Comparing students' posttest core curriculum math grades with grade score nomenclature puts their performance in perspective. A posttest core curriculum math grade of 2.60 is congruent with a letter grade of “C+” and a qualitative description of Average. Comparing students' posttest core curriculum science grades with grade score nomenclature puts their performance in perspective. A posttest core curriculum science grade of 2.00 is congruent with a letter grade of “C” and a qualitative description of Average. Comparing students' posttest core curriculum social studies grades with grade score nomenclature puts their performance in perspective. A posttest core curriculum social studies grade of 2.30 is congruent with a letter grade of “C” and a qualitative description of Average. Comparing students' cumulative grade point average with grade score nomenclature puts their performance in perspective. A posttest cumulative grade point average of 2.50 is congruent with a cumulative grade point average of “C+” and a qualitative description of Average.

Finally, even with three lower grades including the core curriculum reading grade (-0.20), the core curriculum language arts grade (-0.75), and the core curriculum math grade (-0.05) offset by three higher grades including the core curriculum science grade (+0.15), the core curriculum social studies grade (+0.30), and the cumulative grade point average (+0.16) pretest compared to posttest mean core curriculum grades and cumulative grade point averages observed in the core curriculum domain areas represents a mixed pattern of improvement and solid average classroom performance that reflects the impact of participation in the pre-eighth-grade summer academic enrichment program

and school-wide, school year long, ownership, mastery, and grading initiative combined for these students.

### **Research Question #11 Conclusion**

Ending seventh-grade school year pretest core curriculum grades compared to ending eighth-grade school year posttest core curriculum (a) reading, (b) language arts, (c) math, (d) science, (e) social studies, and (f) cumulative grade point average grade scores for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative indicated overall average classroom performance. The ending seventh-grade school year core curriculum grade for reading compared to ending eighth-grade school year core curriculum grade for reading was not statistically different in the direction of an improved posttest compared to pretest core curriculum reading grade. The ending seventh-grade school year core curriculum grade for language arts compared to ending eighth-grade school year core curriculum grade for language arts was statistically different in the direction of a lower posttest compared to pretest core curriculum language arts grade. The ending seventh-grade school year core curriculum grade for math compared to ending eighth-grade school year core curriculum grade for math was not statistically different in the direction of a lower posttest compared to pretest core curriculum math grade. The ending seventh-grade school year core curriculum grade for science compared to ending eighth-grade school year core curriculum grade for science was statistically different in the direction of an improved posttest compared to pretest core curriculum science grade. The ending seventh-grade school year core curriculum grade for social studies compared to ending eighth-grade school year core

curriculum grade for social studies was not statistically different in the direction of an improved posttest compared to pretest core curriculum social studies grade. The ending seventh-grade school year cumulative grade point average compared to ending eighth-grade school year cumulative grade point average was not statistically different in the direction of an improved posttest compared to pretest cumulative grade point average. Comparing students' posttest core curriculum reading grades with grade score nomenclature for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative puts their performance in perspective. A posttest core curriculum reading grade of 2.70 is congruent with a letter grade of "C+" and a qualitative description of Average. Comparing students' posttest core curriculum language arts grades with grade score nomenclature puts their performance in perspective. A posttest core curriculum language arts grade of 2.25 is congruent with a letter grade of "C" and a qualitative description of Average. Comparing students' posttest core curriculum math grades with grade score nomenclature puts their performance in perspective. A posttest core curriculum math grade of 2.85 is congruent with a letter grade of "C+" and a qualitative description of Average. Comparing students' posttest core curriculum science grades with grade score nomenclature puts their performance in perspective. A posttest core curriculum science grade of 2.45 is congruent with a letter grade of "C" and a qualitative description of Average. Comparing students' posttest core curriculum social studies grades with grade score nomenclature puts their performance in perspective. A posttest core curriculum social studies grade of 2.55 is congruent with a letter grade of "C+" and a qualitative description of Average. Comparing students'

cumulative grade point average with grade score nomenclature puts their performance in perspective. A posttest cumulative grade point average of 2.77 is congruent with a cumulative grade point average of “C+” and a qualitative description of Average.

Finally, even with two lower grades including the core curriculum language arts grade (-0.80) and the core curriculum math grade (-0.10) offset by four higher grades including the core curriculum reading grade (+0.05), the core curriculum science grade (+0.50), the core curriculum social studies grade (+0.05), and the cumulative grade point average (+0.05), pretest compared to posttest mean core curriculum grades and cumulative grade point average observed in the core curriculum domain areas represents a mixed pattern of improvement and solid average classroom performance in spite of refusal to participate in the pre-eighth-grade summer academic enrichment program. However, it may be that higher posttest mean core curriculum reading grade, core curriculum science grade, core curriculum social studies grade, and cumulative grade point average reflects the effect of participation in the required school-wide, school year long, ownership, mastery, and grading initiative.

### **Research Question #12 Conclusion**

Overall, results indicated that eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative did not have statistically different posttest ending eighth-grade school year core curriculum grades in any of the reported domain areas. Despite the mixed results evidenced by the pretest compared to posttest results ANOVA posttest comparisons were congruent for all six core curriculum grade measures. Compelling is that the eighth-grade at risk students who



refused a pre-eighth-grade summer academic enrichment program had core curriculum grades that were representative of successful classroom participation and independent class assignment completion congruent with students who completed the pre-eighth-grade summer academic enrichment program suggesting that program support over time that resulted in well within the average range core curriculum grades came from the required school-wide, school year long, ownership, mastery, and grading initiative.

### **Research Question #13 Conclusion**

Overall, pretest-posttest results indicated beginning eighth-grade pretest Fall Building Writing Assessment (FBWA) scores compared to ending eighth-grade posttest Spring State Writing Assessment (SSWA) scores for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative were statistically significantly different in the direction of higher posttest mean SSWA scores. Comparing posttest SSWA scores with writing achievement nomenclature for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative puts their performance in perspective. A posttest SSWA mean score of 5.40 is congruent with a passing state writing assessment score and a qualitative description of proficient.

Finally, the higher SSWA (+1.10) pretest compared to posttest mean writing scores observed in the writing achievement area represents improvement and the impact of participation in the pre-eighth-grade summer academic enrichment program and

school-wide, school year long, ownership, mastery, and grading initiative combined for these students.

#### **Research Question #14 Conclusion**

Overall, pretest-posttest results indicated beginning eighth-grade pretest Fall Building Writing Assessment (FBWA) scores compared to ending eighth-grade posttest Spring State Writing Assessment (SSWA) scores for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative were statistically significantly different in the direction of higher posttest mean SSWA scores. Comparing posttest SSWA scores with writing achievement nomenclature for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative puts their performance in perspective. A posttest SSWA mean score of 5.35 is congruent with a passing state writing assessment score and a qualitative description of proficient.

Finally, the higher SSWA (+0.90) pretest compared to posttest mean writing scores observed in the writing achievement area represents improvement in spite of refusal to participate in the pre-eighth-grade summer academic enrichment program. However, it may be that the higher posttest mean writing scores reflects the effect of participation in the required school-wide, school year long, ownership, mastery, and grading initiative.

**Research Question #15 Conclusion**

Overall, results indicated that eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative did not have statistically different posttest SSWA scores. While all posttest SSWA scores were in the direction of improvement over time pretest to posttest the posttest ANOVA comparisons were congruent for all writing measures. Compelling is that the eighth-grade at risk students who refused a pre-eighth-grade summer academic enrichment program had writing scores reflective of successful classroom participation and independent class assignment completion suggesting that program support over time that resulted in improved SSWA scores came from the required school-wide, school year long, ownership, mastery, and grading initiative.

**Research Question #16 Conclusion**

Overall, posttest compared to posttest engagement findings indicate that the eighth-grade students at risk who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative were not statistically different in their athletic and activities cumulative participation frequencies. Percents for at risk students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative posttest athletic and activities cumulative participation frequencies were 26 (46%) for the 2007 school year and 31 (54%) for the 2008 school year. Percents for at risk students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative posttest athletic

and activities cumulative participation frequencies were 25 (42%) for the 2007 school year and 34 (58%) for the 2008 school year. Given the statistical equipoise observed it may be said that both groups of at risk students, those who completed and those who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative were equally engaged in the research school. Further, both groups of students' posttest athletic and activities cumulative participation frequencies improved over time, 2007 to 2008, indicating the potential for these students to engage in positive extra-curricular and co-curricular experiences as they make the transition to high school improving the likelihood that they will stay in school, achieve, and graduate.

#### **Research Question #17 Conclusion**

Overall, pretest-posttest results indicated ending seventh-grade school year cumulative behavior compared to ending eighth-grade school year cumulative behavior (a) absences, (b) tardies, and (c) discipline for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative were not statistically significantly different in the direction of lower posttest mean cumulative behavior frequencies for absences, and were not statistically significantly different in the direction of higher posttest mean cumulative behavior frequencies for tardies and discipline. Comparing posttest cumulative behavior frequencies for absences with school behavior nomenclature for at risk eighth-grade students who completed a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative puts their performance in perspective. A cumulative behavior frequency for absences of 9.30 is congruent with not

meeting school behavior expectations resulting in attendance-based intervention including parent notification and conference with the student. Comparing students' posttest cumulative behavior frequencies for tardies with school behavior nomenclature puts their performance in perspective. A cumulative behavior frequency for tardies of 8.00 is congruent with not meeting school behavior expectations resulting in attendance-based intervention including parent notification and conference with the student. Comparing students' posttest cumulative behavior frequencies for discipline with school behavior nomenclature puts their performance in perspective. A cumulative behavior frequency for discipline of 4.80 is congruent with not meeting school behavior expectations resulting in discipline-based intervention including parent notification and conference with the student.

Finally, the lower cumulative behavior frequencies for absences (-0.35) and the higher cumulative behavior frequencies for tardies (+2.60) and discipline (+0.90) pretest compared to posttest mean cumulative behavior frequencies observed in the three behavior areas represents a mixed pattern of improvement that requires rethinking school wide behavioral support strategies that could be implemented throughout the school year and during summer enrichment programs.

### **Research Question #18 Conclusion**

Overall, pretest-posttest results indicated ending seventh-grade school year cumulative behavior compared to ending eighth-grade school year cumulative behavior (a) absences, (b) tardies, and (c) discipline for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative were statistically

significantly different in the direction of higher posttest mean cumulative behavior frequencies for absences, and were not statistically significantly different in the direction of higher posttest mean cumulative behavior frequencies for tardies and discipline. Comparing posttest cumulative behavior frequencies for absences with school behavior nomenclature for at risk eighth-grade students who refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative puts their performance in perspective. A cumulative behavior frequency for absences of 8.90 is congruent with not meeting school behavior expectations resulting in attendance-based intervention including parent notification and conference with the student. Comparing students' posttest cumulative behavior frequencies for tardies with school behavior nomenclature puts their performance in perspective. A cumulative behavior frequency for tardies of 5.85 is congruent with not meeting school behavior expectations resulting in attendance-based intervention including parent notification and conference with the student. Comparing students' posttest cumulative behavior frequencies for discipline with school behavior nomenclature puts their performance in perspective. A cumulative behavior frequency for discipline of 4.65 is congruent with not meeting school behavior expectations resulting in discipline-based intervention including parent notification and conference with the student.

Finally, the higher cumulative behavior frequencies for absences (+2.15), tardies (+3.10), and discipline (+0.30) pretest compared to posttest mean cumulative behavior frequencies observed in the three behavior areas represents a clear pattern of increased behavior among these students that requires rethinking school wide behavioral support

strategies that could be implemented throughout the school year and during summer enrichment programs.

### **Research Question #19 Conclusion**

Overall, results indicated that eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program and participated in a school-wide, school year long, ownership, mastery, and grading initiative did not have statistically different posttest ending eighth-grade school year cumulative behavior (a) absences, (b) tardies, and (c) discipline mean frequencies. While all posttest mean cumulative behavior frequencies, except for cumulative absences for eighth-grade at risk students who completed the pre-eighth-grade summer academic enrichment program, were in the direction of higher behavior frequencies over time pretest to posttest the posttest ANOVA comparisons were congruent for all behavior measures. Of concern is that eighth-grade at risk students who completed and refused a pre-eighth-grade summer academic enrichment program struggled with higher absences, tardies, and discipline frequencies despite participation in the school-wide, school year long, ownership, mastery, and grading initiative suggesting greater emphasis on rethinking school wide behavioral support strategies that could be implemented throughout the school year and during summer enrichment programs.

### **Discussion**

Students who were at risk for school failure clearly benefited in positive ways from participation in the study's school-wide, school year long, ownership, mastery, and grading initiative. When provided with direct required support students at risk may experience success. Both groups of students, those that completed and those that refused the pre-eighth-grade

summer academic enrichment program, demonstrated improvement in the areas of academic achievement and school engagement directly attributable to participation in the study's school-wide, school year long, ownership, mastery, and grading initiative. In this study, both groups of students completed the research school year with statistically improved NRT NCE scores for language arts, math, and Spring State Writing Assessment scores. Because both groups of at risk students maintained average achievement test scores on several measures with commensurate classroom grade performance and engagement to support school success during eighth-grade, continued implementation of the school-wide, school year long, ownership, mastery, and grading initiative, informed by best practices for instruction and assessment, continued implementation of this proactive intervention is strongly encouraged. It should be noted that behavior measures such as absences, tardies, and discipline referrals continue to be areas of concern for at risk students, even with active participation in a school-wide, school year long, ownership, mastery, and grading initiative. Due to this observation, the research school will also need to assertively seek and implement school-wide positive behavioral support strategies that empower students and their parents to believe each school day is important and that attendance is not optional.

**Implications for practice.** It is during the early and middle adolescence years that many students begin failing academically, and by the ninth-grade would be considered at risk for not completing high school (Balfanz, 2011). Therefore, schools--particularly middle schools--need to develop early-warning systems that can identify students when they begin to display behaviors (absences, tardies, low grades, apathy) that could in any way disrupt their pathway towards graduation (Balfanz, 2011). One of our top priorities as educators should be to make certain that every student believes that they have a vested interest in and ownership of their learning and come to school every day. Because middle school students often lack a sense of how classroom



instruction may be important to their lives they often leave school under the misguided notion that away from school they are now grown up and making decisions that are in their own best interest (Vokoun & Bigelow, 2008). Interestingly, literature about adult workplace burnout suggests that the best predictor of early job leaving is not too much work, too little time, or too little compensation, rather it is powerlessness--a lack of control over what one is doing (Kohn, 1993). With these thoughts in mind, educators must commit to consistently utilizing instructional and assessment practices that engage and empower our students in active learning that both inspires and results in mastery.

**Implications for policy.** More than ever, it is the responsibility of every educator to communicate and demonstrate through their actions, that a high quality education is not optional for our youth. Far too many students and parents have been allowed to approach schooling as if it were an elective offering rather than a required experience that is critical to the students' future opportunities and success. Drastic measures must be employed so that every student and parent clearly understands that attending school on a daily basis and arriving ready to learn is the expectation for all students. In addition, school systems must accept the reality that at risk students require additional supports from teachers and administrators to include *in loco parentis* action beyond the scope of the traditional school day. Moreover, students are more likely to be successful academically when they are engaged in the school environment. Whether that engagement is the result of academic interest or a desire to participate in extra-curricular or co-curricular activities is not as important as the fact that the student is excited and energized about coming to school every day. Furthermore, when students and parents believe that schools have their best interests in mind--meaningful social and emotional growth and academic success for their child--all will be connected and committed to partnering with the school (Kugler, 2011).

Once students are in school, teachers, counselors and administrators must work together to provide meaningful and substantive learning experiences that cultivate student interest and foster the intrinsic desire to learn and grow. Educators can no longer wait until after students are exhibiting characteristics of disengagement from school to intervene with support strategies. Proactive support systems and research-proven instructional strategies are the only options to consider when it comes to meeting the needs of all students. However, if improving learning for all students is truly to be at the heart of our efforts than the universal practice of rating nearly every teacher *satisfactory* must end (Jerald, Haycock, & Wilkins, 2009). School leadership staff must insure that the teachers that are entrusted with the education of our students are nothing less than the most positive, committed, and best trained teachers. This notion must hold true in all buildings, especially those that serve high numbers of youth at risk. Without addressing inequitable access to quality teachers, efforts to boost the achievement of at risk students are likely to come up short of the desired result, a quality education for all students (Jerald, Haycock, & Wilkins, 2009).

**Implications for further research.** Completion of the pre-eighth-grade summer academic enrichment program was found not to be a critical factor in the achievement, engagement, and behavior outcomes of at risk students at the study school. Therefore, additional research must be conducted on how to best insure that students are consistently exposed to best practices in instruction and assessment. Exploring the benefits of an extended school day or extended school year that is based on the implementation and daily use of best practices in instruction and assessment may provide insight that would allow school systems to determine the potential advantages of this approach. Similarly, because the majority of staff development that educators receive occurs at the building level, research should be conducted to identify the most

effective strategies for educational leaders to use when training teachers on how to effectively implement and utilize best practices in instruction and assessment that will insure that every student wants to come to school every day, every student wants to work hard in school every day, and every student experiences the joy of learning and succeeding in school every day--and in so doing envision themselves graduating from high school and beyond.

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