THE EFFECTS OF HETEROGENEOUS SMALL LEARNING ACADEMIES ON SECONDARY STUDENT ACHIEVEMENT

by

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ABSTRACT

This study focused on the differences in outcomes for three academic years of 10th grade students grouped into standard and advanced classes compared to three academic years of students grouped into heterogeneous academies. A *chi-square* analysis indicated that the mixed-ability group outperformed the standard/advanced grouped students on reading, language, and social studies exit exam subtests in the majority of disaggregated subgroups. Results revealed that the mixed-ability grouping intervention was especially effective for females and students from lower socioeconomic levels. Additional descriptive and qualitative data supported the quantitative findings through patterns and themes consistent with instructional and cultural school improvement. The findings are congruent with the research on the benefits of academies and small learning communities on student motivation and achievement. Interviews of academy teachers further supported these findings and the relevant research by revealing that restructuring the school day alone will not necessarily increase student motivation and achievement. The restructuring must be accompanied by motivational strategies, professional development, improved teacher practices, and administrative support.

DEDICATION

This study and the resulting dissertation are dedicated to the hardworking teachers, professors, and administrators who enter school buildings across America every day looking for more effective ways to educate our students and improve our society.

LIST OF ABBREVIATIONS AND SYMBOLS

df	Degrees of freedom: number of values free to vary after certain restrictions have been placed on the data
N	Number of subjects
p	Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value
Sig.	Significance
χ^2	Chi-Square
<	Less than
=	Equal to

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CHAPTER I

INTRODUCTION

"No member of the society is fully educated or valued unless all members of the society are educated and valued" (Burke, 1995, p. 185).

Education is polarizing: civilized, uncivilized; Greek, Roman; agricultural, industrial; Republican, Democrat, traditional; progressive, vocational, college prep; standard, advanced; homogenous, heterogeneous. As is the case with most impassioned topics, people take sides. When people take sides, what is best for our children sometimes gets lost somewhere in between what each side vehemently supports. Even when something does happen to cause us to stop and reflect upon the true purpose of education, we often have trouble agreeing. Some would side with Dewey (1997) that, "The main purpose or objective [of education] is to prepare the young for future responsibilities and for success in life, by means of acquisition of the organized bodies of information and prepared forms of skills which comprehend the material of instruction" (p. 18). Others would hold to a more cultural, liberal, or "free" and "progressive" approach as that found in A. S. Neill's *Summerhill* (Cuban, 1993). Regardless of the side taken, all of us must agree that in order to challenge and educate the children of today's global and "plugged-in" society, we must look to new structures, new directions, and new possibilities. It is the knowledge that has been gained over the past few decades of educational research that can help us map out this new path.

In the past 30 years, new educational research on teacher behaviors, student motivation, and best practices has begun to emerge which more fully addresses the complexities of educating

students (Good & Brophy, 2003). With this in mind, it seems that educators and policymakers would naturally design new approaches to instruction and assessment. In many cases, however, what the field of education is experiencing is intensified versions of old approaches (Hallam & Ireson, 2003; Holloway, 2001; Oakes, Wells, Jones, & Datnow, 1997). Two key examples that support this assertion are the renewed interests in ability grouping and standardized testing (Chiu & Khoo, 2005; Hendrix, 2007; Ireson & Hallam, 1999; Ireson, Hallam, Hack, Clark, & Plewis, 2002; Jacob, 2001; Mickelson & Everett, 2008; Oakes, 2008; Reising, 2000; Rubin, 2008).

While ability grouping has long been used as a way to ease the burden of educating diverse populations, it was not until the mid 1980s that the issue came to the forefront of the educational debate. What some saw as a simple way of creating a "best- fit" approach to instruction, others began viewing as a practice that subjugates and limits minority and disadvantaged populations (Oakes, 1985). Ability grouping has often been seen as one of the major forces behind the lack of equity in American education, and many people believe that the practice no longer exists as a result of this intense scrutiny (Oakes, Wells, & Jones, 1997). Nevertheless, ability grouping--or "tracking" in its purest form--still exists in various configurations across the educational spectrum. Even though it no longer receives the educational research spotlight, this form of grouping students still creates much discussion among today's educators (Oakes, 2008).

The reason for this new debate can be directly linked to the relatively recent institutionalization of high-stakes testing in education for accountability (Carnoy, Elmore, & Siskin, 2003; Reeves, 2004). As Madaus and O'Dwyer (1999) point out, however, the idea of basing policy and placement decisions on test results dates back as far as China in 210 B.C.E. The authors continue their discussion of testing by following its development throughout history

from the pre-modern period, to the modern period, and then on into post-modernism. As an assessment tool, various forms of testing have been developed to meet the demands of society. With the advent of written examinations, multiple-choice items, and mechanical scoring, the process of testing large numbers of people has maintained its feasibility with relation to an ever-increasing population. In order to meet the demand for testing, assessors began looking at streamlined and standardized ways of mass producing, administering, and scoring large quantities of exams.

Statement of the Problem

The above-mentioned approaches to testing have been put into place to provide more accountability for the educational process, and while students have often been grouped by ability in order to better meet their educational needs, this grouping has now created several problems with the testing measures (Paige, No Child Left Behind, 2001). Many educators are experiencing a dichotomous breakdown of the test data between students who are on college-preparatory "tracks" and those who are seeking vocational or technical diplomas (Ireson & Hallam, 1999; Loveless, 1999). Some schools have noticed clear patterns between the overall preparation and achievement levels of those students on the "college-preparatory" track and those on the "vocational" track. While the majority of "advanced" students pass graduation exams and meet graduation requirements with little remediation, students on other paths, including vocational students or "regular" diploma students, find themselves ill-prepared to pass exit exams and meet minimal requirements for graduation without intense remediation and intervention strategies (Exit Exams, 2009). As a result of these experiences, a new focus has been placed on "closing the achievement gap." The main problem in many high schools is that students are being held

accountable for material that they are never taught because many teachers are still functioning under pre-conceived ideas about what students need to know and be able to do for their chosen diploma type. This increased focus on testing has also led to a shift in instruction in many schools. More teachers report teaching to the test, engaging students in test preparation activities, and assigning hours of drill and practice (Lacroix, 2001). These techniques appear to be changing the school culture negatively in terms of student satisfaction with schooling as well as the number of students who stay in school to receive a high school diploma.

Even though the concept of "tracking" has changed in recent years, the practice continues in various forms as an approach for institutions to address the varied needs of a growing diversity of students. Instead of searching for individualized approaches to meeting the needs of all students, schools under budget and personnel strains are limited to how much individualization can be accomplished. Having students choose between "college-prep" or "vocational" paths has been a viable means of offering some choice and attempting to meet the needs of different students. Most institutions have used this grouping practice for years without really questioning the equity behind it or the lasting effects that it might have on individual students (Oakes, 2005). According to Anderle (2008), the initial impetus for a "non-academic" or "vocational" track was established through the Smith-Hughes Act of 1917. This Act was drafted to help schools deal with an influx of students from the "new working class" who did not need the same preparation as students who were to become "professionals." As Oakes et al. (1997) point out though, this practice has continued to the extent that it has because many educational professionals and policy-makers still genuinely believe that this type of "grouping" is in the best interest of all students. The argument to be addressed here is whether or not "detracking" students for certain courses during the day will give them greater access to quality instruction, better peer role

models, and increased academic resources and whether or not this approach will yield any difference in student outcomes in terms of passing high-stakes graduation exams, performance-based writing assessments, and fulfilling other requirements for earning a high school diploma.

Significance of the Problem

While it is not ideal to connect student achievement or attainment solely with passing high-stakes graduation examinations, it is important to consider the value of a high school diploma. Passing these tests should, in fact, be a simple by-product of a solid and rigorous educational experience (Bishop, Mañe, & Bishop, 2001). All students deserve the same opportunities to learn and to pass the exams and receive diplomas. Students should be equally prepared in terms of basic minimum standards at all levels in order to provide them with the best advantages when faced with high-stakes testing. Much of the current approach in preparing students for these assessments, however, allows for spending little time and effort upfront at the earlier grade levels. This is not to be viewed as a lack of effort on the part of the earlier teachers, but should be viewed as incongruence in approaches to instruction, student expectations, and a basic lack of curricular alignment (Albrecht & Joles, 2003). Students in their eleventh and twelfth grade years then require enormous time and resources for "remediation." As can be seen in Table 1, exit exams generally target specific content areas such as algebra, biology, American history, and tenth to eleventh grade language arts and reading skills. Students who do not pass an exit exam early on often find themselves moving farther and farther beyond the content of the exam, losing any motivation or sense of hope for passing, and beginning to consider their dropout options (Amrein & Berliner, 2003; Harlen, 2003; Horn, 2003). Parents and students both quickly lose hope and begin to further question the value of a high school diploma. This not only

lowers the students' self-image about potential success, but it also hinders the process of genuinely engaging students with creative and critical educational tasks during the last two years of high school because much of this time is spent re-drilling for the exit exam in order to increase the overall percentages of students passing. Without meaningful and relevant educational opportunities, these students are even more likely to give up and become high school dropouts (Balfanz, Letgers, & CRESPAR, 2004; The Woodrow Wilson National Fellowship Foundation, National Commission on the High School Senior Year, 2001).

In an attempt to address some of these issues, the administration and faculty of Academy High, a small rural school in Central Alabama, decided to implement a small learning community approach for all sophomores. Even though many schools have experienced a bottleneck of students at the ninth grade level, which often leads to increased dropouts, students at Academy High were successfully completing ninth grade courses and transitioning into tenth grade (Balfanz, Fox, Bridgeland, & McNaught, 2009). Since the school is structured as a 7-12 facility with one wing dedicated to seventh and eighth graders, the school has a good transition plan in place and many teachers teach both upper and lower grade courses. After an initial inquiry approach to school improvement which resulted from the Southern Association of Colleges and Schools (SACS) Report in 2002-2003, teams of teachers began studying strategies and structures which would increase overall student achievement. One suggestion that emerged from these professional learning communities was the academy approach. Since many "standard diploma" students at the school were struggling to pass all portions of the Alabama High School Graduation Exam (AHSGE), faculty members and administrators decided to target tenth graders for the academy structure in an attempt to provide an equitable distribution of high quality

teachers and access to educational resources during an academic year when students are faced with five portions of the exit exam and the Alabama Direct Assessment of Writing.

One of the primary goals of the academies was to equally and equitably distribute students into three tenth grade sections with an even number of males, females, English language learners, and special education students. Students were ranked and then assigned to one of the three sections based on their overall grade point averages from the previous school year. The ranked list was used to equitably divide students into the three sections. After careful hand scheduling, all three sections during the first year of implementation were very equally balanced with less than one point separating the mean GPA for all three groups on a 100-point scale.

Another goal of the academy structure was to form a team of teachers with a common planning time in order to better design cross-curricular learning opportunities and provide additional support to struggling students. Teachers who had been accustomed to teaching groups of either “advanced” or “standard” students now needed additional training in differentiated instruction and varying instructional strategies for diverse learners. Teachers worked together throughout the year to support each other and all learners in the endeavor to prepare all students for the Alabama High School Graduation Exam (AHSGE) and the Alabama Direct Assessment of Writing (ADAW).

A final, and even more important goal for the educators involved, was to use the academy structure to improve the overall school culture. Over the years, a very clear division had emerged between the “advanced” students and the “standard” students. Teachers felt that by mixing these students for three class periods each day, students would be forced out of their comfort zones and gain a better appreciation for students outside their normal peer groups.

Purpose of the Study

The first purpose of this mixed-methods study was to identify the correlation between student grouping and student passing rates on high school exit exams. Two types of grouping were analyzed: self-tracked groups of 10th grade academic and vocational students and mixed-ability 10th grade students in "academy" settings. For this study, achievement was defined by either passing or failing to pass three portions of the Alabama High School Graduation Exam (AHSGE) including language, reading, and social studies. The study was designed to measure whether or not a correlation existed between the type of student grouping and success rates for passing portions of the exit exam on the first attempt. The study specifically examined the existing test data for six cohort groups of 10th grade students between 2001 and 2007. The three cohorts between 2001 and 2004 remained grouped in either academic or vocational tracks all day and served to provide benchmark data for the study; the 2004 to 2007 cohort groups were placed in mixed-ability groups for three class periods during the day. Each cohort group contained approximately 60 to 65 students for a total study population of 371, with 180 students in the pre-intervention group and 191 students in the treatment group. Having six years of data allowed for a retrospective analysis to examine the effectiveness of measurement-driven reform that was put into place to attempt to close the achievement gap experienced by students from differing graduation pathways.

The second purpose of the study was to determine through the use of descriptive statistics whether or not a relationship exited between these two types of student groupings and levels of success on the Alabama Direct Assessment of Writing (ADAW). Again, the existing writing assessment results for the cohorts were compared to determine whether or not any connection existed between the type of grouping and the level of success attained on the writing assessment.

On the holistic writing scale, students have the potential of scoring between a level 0 and a level 4 on the assessment, and these scores were compared for students in the two different types of grouping cohorts as well. Statistical analysis could not be run on ADAW scores because the test was not administered to tenth-grade students prior to 2004. Having a large variation in sample sizes for the pre and post group prevented reliable and valid statistical analysis.

A third purpose of the study was to qualify effective teacher behaviors that promote overall student achievement at the sophomore level. Teacher survey questions were used to determine the teacher beliefs, perceptions, and instructional practices related to traditional academic and vocational grouping as compared to "academy" groupings of mixed-ability students. Answers to the teacher survey questions helped determine whether or not the two types of student grouping had any bearing on teacher beliefs, perceptions, or instructional methodology.

Significance of the Study

While a growing body of literature exists in the areas of ability grouping (Atkins & Ellsesser, 2003; Bracey, 2003; Cheung & Rudowicz, 2003; Hallam & Ireson, 2003; Oakes et al., 1997), the academy structure (Anderle, 2008; Cramer, 2006; Hendrix 2007; McDaniel, 2008; Weyers, 2005) and high-stakes testing such as exit exams (Albrecht & Joles, 2003; Amrein & Berliner, 2003; Ashford, 2003; Center on Education Policy, 2007; Vogler, 2000), only minimal literature or research focuses on combining the academy or small learning community structure with mixed-ability groupings in order to better prepare all students for success on high school exit exams. According to the Center on Education Policy (2007), 76% of students in the United States live in the 26 states that either require or will require the passing of such exams by 2012

before being granted a high school diploma. This number is even higher for students of color (82%) according to the Center (see Table 1). With the stakes being so high, and with Alabama's implementation of the First Choice policy that required all entering freshmen in the fall of 2009 to begin their high school studies with the Alabama High School Diploma with an Advanced Academic Endorsement as the default diploma, it is vital that new approaches and new structures be developed and researched for helping more students successfully obtain their high school diplomas instead of dropping out of school. Another important factor contributing to the significance of this study is Alabama's move toward end-of-course exams to keep with the current trends reflected in Table 1. This study provides additional research exploring the combination of several factors and the possible correlation between these factors in order to provide further insight into administrative and policy decisions affecting student success.

Table 1

Major Characteristics of State Exit Exams

State	Current Exam	Consequences Begin/Began for Class of	Subjects Tested	Type of Test	Grade Level of Alignment	Grade Test First Administered	Prior Exit Exam or Exam Being Phased Out
Alabama	Alabama High School Graduation Exam (AHSGE) 3rd Edition	2001	Reading, language, math, science, social studies	Standards-based	11th	10th	Alabama High School Graduation Exam (AHSGE) 1st and 2nd Editions
Alaska	Alaska High School Graduation Qualifying Exam (HSGQE)	2004	Reading, writing, math	Standards-based	8th-10th	10th	None
Arizona	Arizona's Instrument to Measure Standards (AIMS)	2006	Reading, writing, math	Standards-based	10th	10th	None

(*table continues*)

State	Current Exam	Consequences Begin/Began for Class of	Subjects Tested	Type of Test	Grade Level of Alignment	Grade Test First Administered	Prior Exit Exam or Exam Being Phased Out
Arkansas	Arkansas Comprehensive Assessment Program	2010	Literacy, Algebra I, geometry	End-of-course	Literacy (11th), Algebra I and geometry (aligned to course content)	Varies	None
California	California High School Exit Exam (CAHSEE)	2006	ELA, math	Standards-based	ELA (through 10th), math (6th-7th and Algebra I)	10th	None
Florida	Florida Comprehensive Assessment Test (FCAT)	2003	Reading, math, and writing (2010)	Standards-based	10th	10th	High School Competency Test (HSCT)
Georgia	Georgia High School Graduation Test (GHSGT)	1994	ELA, writing, math, science, social studies	Standards-based	9th-11th	11th	Basic Skills Test
Idaho	Idaho Standards Achievement Test (ISAT)	2006	Reading, language, usage, math, science	Standards-based	10th	10th	None
Indiana	Graduation Qualifying Exam (GQE)	2000	ELA (through 9th), math (through pre-algebra and Algebra I)	Standards-based	9th	10th	None
Louisiana	Graduation Exit Examination (GEE)	2003	ELA, math, science, social studies	Standards-based	9th-12th	10th	Graduation Exit Exam
Maryland	Maryland High School Assessment System (HSA)	2009*	English II, algebra/ data analysis, biology, government	End-of-course	10th	Varies	Maryland Functional Tests

(*table continues*)

State	Current Exam	Consequences Begin/Began for Class of	Subjects Tested	Type of Test	Grade Level of Alignment	Grade Test First Administered	Prior Exit Exam or Exam Being Phased Out
Massachusetts	Massachusetts Comprehensive Assessment System (MCAS)	2003	ELA, math, science (2010), U.S. history (2012)	Standards-based plus end-of-course exams in science (2010) and U.S. history (2012)	10th	10th; science will vary	None
Minnesota	Graduation Required Assessment for Diploma (GRAD)**	2010	Reading, writing, math	Standards-based	Writing (9th), reading (10th), math (11th)	Writing in 9th; reading in 10th; math in 11th	Basic Skills Test (BST)
Mississippi	Mississippi Subject Area Testing Program (SATP)	2006	English II (with writing component), Algebra I, Biology I, U.S. History from 1877	End-of-course	Aligned to course content	Varies	Functional Literacy Examination (FLE)
Nevada	High School Proficiency Examination (HSPE)	2003	Reading, writing, math, science (2008)	Standards-based	9th 12th	10th	High School Proficiency Examination (earlier version based on 1994 curriculum)
New Jersey	High School Proficiency Assessment (HSPA)	2003	Language arts literacy, math; starting 2010, end-of-course exam in biology	Standards-based plus one end-of-course (2010)	11th	11th; biology will vary	High School Proficiency Test-11
New Mexico	New Mexico High School Competency Examination (NMHSCE)	1990	Reading, language arts, composition, math, science, social studies	Minimum competency	8th	10th	None

(*table continues*)

State	Current Exam	Consequences Begin/Began for Class of	Subjects Tested	Type of Test	Grade Level of Alignment	Grade Test First Administered	Prior Exit Exam or Exam Being Phased Out
New York	Regents Examinations	2000	ELA, math, science, social studies, language other than English	End-of-course	9th-12th	Varies	Regents Competency Tests
North Carolina	North Carolina Competency Tests and Tests of Computer Skills	1982 (math/ reading) 2001 (computer skills) 2010 (end-of-course exams)	Reading comprehension, math, computer skills; starting 2010, end-of-course exams in Algebra I, English I, U.S. history, civics and economics, biology	Standards-based, plus five end-of-course exams beginning in 2010	8th	8th; end-of-course exams will vary	None
Ohio	Ohio Graduation Tests (OGT)	2007	Reading, writing, math, science, social studies	Standards-based	10th	10th	9th Grade Proficiency Tests
Oklahoma	Oklahoma End-of-Instruction (EOI) Exams	2012	English II, English III, Algebra I, Algebra II, geometry, Biology I, U.S. history	End-of-course	High school standards	Varies	None
South Carolina	High School Assessment Program (HSAP)	2006	ELA, math, science (2010), U.S. history (2010)	Standards-based; plus two end-of-course exams in science and history (2010)	Through 10th	10th; end-of-course exams will vary	Basic Skills Assessment Program (BSAP)
Tennessee	Gateway Examinations	2005	English II, Algebra I, Biology I,	End-of-course	10th	Varies	Tennessee Competency Test

(*table continues*)

State	Current Exam	Consequences Begin/Began for Class of	Subjects Tested	Type of Test	Grade Level of Alignment	Grade Test First Administered	Prior Exit Exam or Exam Being Phased Out
Texas	Texas Assessment of Knowledge and Skills (TAKS)	2005	ELA (reading/ writing), math, science, social studies	Standards-based	Aligned to course content	11th	Texas Assessment of Academic Skills (TAAS)
Virginia	Standards of Learning (SOL) End-of-course exams	2004	English (reading/writing), Algebra I, Algebra II, geometry, biology, earth science, world history to 1500, world history from 1500, Virginia and U.S. history, world geography	End-of-course	Aligned to course content	Varies	Literacy Passport Test
Washington	Washington Assessment of Student Learning (WASL)	2008	Reading, writing, math (2013), science (2013)	Standards-based	10th	10th	None

Note. Table reads: Alabama currently administers the Alabama High School Graduation Exam (AHSGE), 3rd Edition, for which consequences began for the class of 2001. The exam assesses reading, language, math, science, and social studies, and is considered by the state to be a standards-based exam aligned to 11th grade standards. The exam is administered for the first time in the 10th grade. The current test replaced the Alabama High School Graduation Exam, 1st and 2nd Editions.

*Maryland is considering delaying the requirement for students with disabilities and English language learners. The state will use results from the 2007 testing period to determine the number of years to exempt these subgroups.

**Minnesota and Texas will transition to new exams. Minnesota is transitioning from the BST to the GRAD test. The state will continue to withhold diplomas based on the BST until 2009. The class of 2010 will be the first class required to pass the new GRAD requirement. Texas students entering 9th grade in 2011 will be the first required to pass the state's 12 new end-of-course exams. The first class required to pass the new exams will be the class of 2013.

Note: ELA=English language arts.

Source: Center on Education Policy, exit exam survey of state departments of education, June 2007. *Permission to use granted by the Center on Education Policy*

Research Questions

The following research questions were addressed in the study:

1. Is there a correlation between student grouping (academic/vocational tracked or mixed-ability detracked) and passing rates on the language, reading, and social studies portions of the Alabama High School Pre-Graduation Exam (AHSGE)?

2. Is there a connection between student grouping (academic/vocational tracked or mixed-ability detracked) and student levels of writing attainment as measured by holistic scores on the Alabama Direct Assessment of Writing (ADAW)?

3. Does the change from traditional academic/vocational tracks to a mixed-ability detracked student grouping create any changes in the beliefs, perceptions, and educational practices of teachers working within these educational contexts?

Operational Definitions of Terms/Variables

The following terms and definitions are used throughout the study:

Ability Grouping--the practice of placing students into either short-term or long-term groups based on perceived academic ability.

Academy--a structured Small Learning Community (SLC) (Oxley, 2005) which groups students into grade-alike cohorts with a selected team of teachers. The main difference in the definition of the term for this study and other usage is that students were not grouped into career academies, and instruction did not revolve around pre-set themes or career pathways. Unlike other "academies," students were intentionally ranked and detracked in order to create mixed-ability groups which were evenly balanced in terms of English language learners, special education, and gender.

Alabama Direct Assessment of Writing (ADAW) for Grade 10--a 60-minute open-ended holistic assessment of student writing based on student responses to assigned prompts in one of three modes: narrative, expository, or persuasive.

Alabama High School Pre-Graduation Exam 3rd Edition (AHSGE)--the pre-graduation test mandated by the state of Alabama to be given to all 10th graders. Students who complete advanced math courses and biology earn the opportunity to sit for exams earlier in the year than other students. Students who "pass" the pre-exam receive credit and are not required to re-take the passed portions. Individual scores are not posted for students who pass the exam, so results are reported as either "pass" or "attempt."

Collaborative Inquiry--an approach used by a group or team of people to work together to examine a problem and pose possible solutions. Probable solutions are then tested out by the team members with success rates reported back to the group. The team continues to address issues and problems as they arise through the collaborative inquiry model (Nelson, 2009).

High-stakes testing--any test that is used for the purpose of promotion, retention, or other forms of punishment and rewards (Brandt, 1989; Gordon & Reese, 1997).

Pre-intervention--the term used throughout the study to refer to the three academic years of students prior to the implementation of the academy structure.

Post-intervention--the term used throughout the study to refer to the three academic years of students after the implementation of the academy structure.

Student achievement--measured by the standardized tests cited above (AHSGE and ADAW) for the purposes of this study. Pre-Graduation Exam results are reported as either "pass" or "attempt" on all five sections, and the holistic scale on the ADAW determines achievement

based on possible levels from 0 to 4, with 4 being the highest score possible and 0 being non-scoreable.

Tracking--the practice of placing students into very rigid academic groups or "tracks" based on past performance. Tracking is usually defined as a more permanent student group.

Limitations of the Study

The re-grouping of students has only been possible for three of seven periods due to scheduling conflicts and existing Alabama graduation requirements for varying diploma types. Many students for the study are from lower-middle to lower socio-economic backgrounds and white, non-Hispanic, although about 8% of the total school population is Hispanic. Results for the study will only be applicable to similar educational settings and situations, but the information regarding teacher beliefs, perceptions, and instructional practices should offer some guidance for other educational settings as well.

Several specific limitations should be considered:

1. Variables such as teacher experience and preparation are difficult to control.
2. Students have pre-conceived ideas regarding their diploma types.
3. School culture and leadership influence the student outcomes to a degree.
4. A "control group" and "experimental group" could not be specifically formed.
5. Prior student ability going into the study was uncontrollable.
6. Student results may vary according to gender and socio-economic status.

Assumptions

The primary assumptions made for this study was that student performance on the targeted assessments was indicative of true motivation and ability. Measures helping to control for this assumption included using both multiple-choice and performance-based assessments such as the AHSGE and the ADAW. Other assumptions included the following:

1. Student culture affected motivation and achievement.
2. Teachers in the academy structure did their best to prepare all students equally for the assessments.
3. Students applied themselves and worked to prepare for the assessments.
4. Engagement had some affect on student success on the assessments.
5. Gender and socioeconomic levels had some bearing on the results.

CHAPTER II

REVIEW OF LITERATURE

Introduction

While many studies have been conducted on ability grouping and high-stakes testing at both the national and international levels, very little research has been conclusive on the overall interaction between these two variables. In the past decade, a growing body of research has been conducted in Britain where a push to group students by ability has been debated as a means of boosting student achievement (Boaler, 2003; Ireson et al., 2002). This grouping approach appears to be in response to many of the problems with accountability, discipline, and motivation facing education today. Still, it remains a question of educational equity.

Even though the spotlight has dimmed on ability grouping over the past 2 decades, a growing body of research has been conducted which helps us better understand the issue of tracking and its effects on students during the current era of No Child Left Behind and increased measures of accountability (Carbonaro & Gamoran, 2002; Chiu & Khoo, 2005; Mickelson & Everett, 2008; Oakes, 2008; Powers, 2004; Rubin, 2008; Watanabe, 2008). A growing body of related research exists with regard to several key components that will be addressed in this study: ability grouping, attitudes toward ability grouping; small learning communities and academies; high-stakes testing, motivation and achievement; issues of equity and teachers' attitudes toward grouping and testing; legal issues of grouping and testing; and special concerns for diverse populations.

Conceptual Framework

Following on the research of John Goodlad and his associates at the University of California at Los Angeles in the late 1970s, which would later become *A Place Called School*, Jeannie Oakes published *Keeping Track* in 1985, a seminal work on tracking. In a sense, Oakes fired the shot heard across America that began the "tracking wars" that raged throughout the late 1980s, 1990s, and on into the first decade of the new millennium. In this and other works, Oakes lays out a clear framework for this study on ability grouping and how it relates to student achievement.

In *Keeping Track*, Oakes (1985) analyzed hundreds of classrooms from 25 junior high and high schools representing various sizes and geographical regions. In all, the data represented 13,719 teenagers across America. One thing that emerged from this research was that at least seven patterns are common to all tracking systems:

1. The presumption is made that students' related past achievements and potential for learning what will be presented in a particular secondary school course or program of courses can be accurately and fairly measured by tests or the judgments of school people.
2. It is assumed that by dividing students according to the results of whatever criteria or measures are used, groups of similar learners will be formed.
3. It is believed that by grouping like students together individual learning needs will be met and that group instruction is probably adequate for the major part of this task.
4. It is thought that, by arranging students in groups so that individual needs can be sufficiently met with common learning goals, instructional activities, and materials, the teaching task is made considerably more manageable for teachers.
5. Regardless of the process used, students are publicly labeled and categorized according to the school's estimation of their potential as learners.
6. The classifications that result from this process are neither neutral nor equal. They form, in fact, a hierarchical system of stratification, with students in the top groups—whether they are labeled "Academic," "College Preparatory," "Gifted," or "High"—accorded the most value and those in the bottom tracks—whether they are called "Vocational," "Low," or "Basic"—accorded the least.
7. Tracking results in different and *not always equal* educational treatments being given to various groups of students. (p. 60)

Oakes (1985) went on to report from her findings that marked differences in the distribution of knowledge and opportunities to learn were evident between the two tracks of students. She also found very real and alarming differences in the attitudes of students, teachers, and administrators when comparing the two tracks. The final point of the first edition of *Keeping Track* came down to a question of educational equity, and Oakes called for further research to explore the causal link between this inequity and "student outcomes."

Twenty years later, Oakes (2005) revisited the issue of tracking in the second edition of *Keeping Track* to report that in many ways a great deal had changed in 20 years and in many ways very little had changed. Despite all of the impetus of the "detracking movement," Oakes stated that "the deep structure of tracking remains uncannily robust" (p. xi). While much of the information for the second edition remained the same, Oakes did add a new preface to the edition and two new concluding chapters. Much of the work in the final chapters was previously published with her colleague Amanda Datnow of Johns Hopkins University in the article "Detracking: The Social Construction of Ability, Cultural Politics, and Resistance to Reform" (1997).

In this article and in the final chapters of the second edition, Oakes followed up on the tracking issue by citing some of the obstacles to detracking schools as well as reporting findings from actual schools and programs that had begun approaching student grouping differently based on the research from the original edition of *Keeping Track*. Oakes (2005) found that for many of these programs, leaders had to battle tradition and meritocracy. Parents of the privileged and "gifted" were often the most vocal and most politically powerful, and many of the programs became compromised as a means of achieving small levels of detracking. In all 10 schools studied, Oakes cited the following:

1. Reduction or the elimination of basic or remedial courses,
2. Equal access to “honors” courses,
3. A common curriculum,
4. Greater awareness of equal learning opportunities,
5. More capable “low-track” students,
6. Greater awareness of the potential of all students,
7. Improved student work,
8. Higher expectations for all students,
9. More student motivation, and
10. A greater variety of instructional strategies. (pp. 281-282)

In the most successful of the 10 schools studied, Oakes (2005) found a “dramatically narrowed” achievement gap and statistically significant gains to support that “detracking raised the bar for all students” (p. 262). In her work, Oakes has also presented evidence to counter the opposing viewpoints of Tom Loveless, James Kulik, and others who have relied on large-scale survey data to “prove” that “tracking” or “ability grouping” actually benefits and does not harm students. In her chapter on “The Tracking Wars,” Oakes reported on researched-based programs such as *High Schools That Work* (HSTW), The College Board’s Equity 2000, Advancement via Individual Determination (AVID), and Quantitative Understanding Amplifying Student Achievement and Reasoning (QUASAR) that promised new hope for mixed-ability classrooms. According to Oakes, many of these detracking programs were inspired by Anne Wheelock’s book *Crossing the Tracks: How “Untracking” Can Save America’s Schools*.

Oakes (2005) distilled her follow-up research into three essential questions:

1. Does tracking create unequal opportunity?
2. Does tracking discriminate?
3. Does tracking matter for students’ outcomes? (pp. 224-225)

Each question was addressed with updated research in order to better address opposing viewpoints. To address the first question, Oakes cited her research supported by the National Science Foundation with colleagues at RAND. After looking at 6,000 classrooms in 1,200

schools, Oakes found that “high-track classes consistently offered richer learning opportunities and more resources, including more highly qualified teachers, than lower-track classes” (p. 226).

To address question two, Oakes (2005) went on to report that African American and Latino students were consistently underrepresented in “high-ability” classes and college preparatory programs in almost every case. Oakes cited that in a national pattern White and wealthy schools generally offered far more “high-track” courses than their non-White and poorer counterparts. While some may say that this is purely economically and culturally based, Oakes went on to report that even in schools with more equitable opportunities, African American and Latino students are often excluded from higher level classes even though they have comparable or better prerequisite scores than their White or Asian peers. Oakes supported her original findings that discriminating patterns of inequity were very clear and that lower-track classes “provided fewer learning opportunities,” and “teachers expected less of these students and gave them less exposure to curriculum and instruction in essential knowledge and skills” (p. 233).

These results, in turn, apply directly to Oakes’s (2005) third question and the key research questions for this study. Oakes consistently reported that the achievement gap widened over time for low-track students and that while “high-track placement led to achievement gains,” “low-track placement had negative effects” (p. 236). In one regression model comparison after controlling for race, school, sex, free/reduced lunch status, and participation in the district’s gifted program, Oakes reported that one group of low-track seventh graders scored as much as five points lower than their “statistically identical” high-track counterparts.

While the critics of detracking posit that the practice no longer exists in its initial derogatory form, Oakes found in a 1995 analysis that only a very small number of 8th and 10th grade classes across the U.S. are described by teachers as heterogeneous: 14.4% for math, 15.5%

for English, and 20% for social studies and science classes at the 8th grade level; 10.8% for math, 14.7% in English, 17.7% in social studies, and 11.6% percent in science at the 10th grade level (pp. 239-240).

With much of the evidence in her favor, Oakes and a colleague Marisa Saunders continued the framework for detracking America's schools in 2008 through editing a collection of peer essays on detracking titled *Beyond Tracking: Multiple Pathways to College, Career, and Civic Participation*. Like many of the other authors addressing tracking, Oakes followed the historical perspective of education so clearly set forth by Cuban (1993) and reflected on the inception of vocational tracking through the Smith-Hughes Act of 1917. With the advent of the first Comprehensive High Schools in 1918, *A Nation at Risk* in the mid-1980s, and the reauthorization of the Carl D. Perkins Act of 2006, Oakes explained the pathways that have led to both the tracking and detracking of America's junior high and high schools. In this area, Oakes's research revealed that there were "no documented advantages for students taking today's vocational programs unless they also take challenging academics" (p. 256).

In addition, Oakes and Saunders (2008) reported research-based evidence that detracking through multiple pathways works by accomplishing the following:

- Increasing student achievement
- Deepening learning
- Promoting graduation and college readiness
- Keeping college options open
- Addressing the special needs of immigrants and English learners
- Linking young people with meaningful, well-paying jobs
- Preparing a skilled and nimble workforce
- Promoting a healthy economy in the context of changing demographics, and
- Promoting civic engagement. (pp. 259-260)

At the same time, however, Oakes and Sounders also found through their research that several obstacles exist to accomplishing further detracking of classrooms:

1. School reform is extraordinarily difficult, and the scaling up of successful reform models has proven especially so.
2. Multiple pathways require ambitious structural changes.
3. Structural changes are necessary but insufficient.
4. Collaboration between K-12 and postsecondary education cannot be assumed.
5. Partnerships with business and public entities may be difficult to establish.
6. An explicit focus on college and career must maintain and improve education's democratic purposes.
7. Policies and additional resources are especially contentious when they are directed to impoverished communities and English learners.
8. Multiple Pathways defies deep-seated cultural norms.
9. Powerful resistance to change may come from many sources. (pp. 260-264)

While Oakes (2008) provides a framework of research spanning over 25 years, she herself calls for further research that explores the connections between tracking and detracking and student outcomes such as achievement, the main purpose of the research in question here.

Ability Grouping

Several studies have been designed to explore the effects of various forms of student grouping on instruction and student achievement. While some studies focus on grouping within a given classroom or setting, the specific studies addressed here measure overall effects of homogenous and heterogeneous grouping on student attitude and achievement. While not all studies to be discussed here fit the exact context of this research, they do all contain certain aspects of the current project and offer insights into the expectations for different student groupings. It is important to note that much of the research conducted and synthesized on ability grouping owes a great debt to the work of Kulik and Kulik (1982), Oakes (2008, 2005, 1997, 1993, and 1985), and Slavin (1990). With this context, the following research studies are more narrowly focused and tend to fit better with the direction of the current study.

Slavin (1990) conducted a meta-analysis on 29 secondary studies in ability grouping and found no significant advantage in the area of achievement as measured by standardized test

scores for grouping students by ability. He also addressed many of the flaws in the studies that have claimed significant benefits of “tracking” students by ability. Among many of the variables that Slavin addressed were student motivation, time on task, quality of instruction, and student behavior. One of the salient points brought forth in Slavin’s argument is that these types of variables cannot be easily controlled for in the analyses. He acknowledged the complexities of instruction and grouping and encouraged instructors to consider that simply grouping students heterogeneously or homogenously will actually have little effect on overall achievement. Slavin noted that not all students will respond the same way to ability grouping and cautioned researchers, policymakers, and classroom teachers to bear this in mind when exploring the issue. These suggestions underpin the very nature of this study and the implications for its reproducibility.

As though ignoring Slavin’s (1990) warning, in a growing culture of equitable educational opportunity, many people have interpreted the concept of ability grouping as equal treatment. One study that addresses the use of ability grouping in a “collectivist culture” was conducted by Cheung and Rudowicz (2003). The study examined the achievement of 2,720 junior high school students chosen at random in Hong Kong. Twelve groups of students were selected from “low-bands,” five from “medium-bands,” and six from “high-bands.” These terms are similar to the upper, middle, and lower “tracks” that are often found in American schools. Most educational institutions now avoid the term “tracking,” but still allow students to group themselves--with parental input--based on whether they are perceived as “standard,” “advanced,” or “gifted/honors.” Cheung and Rudowicz found no significant detrimental effect of “tracking” on the students in Hong Kong. It is important to consider, however, that the effects are likely to be surprisingly different among students raised in a more individualistic society.

Attitudes toward Grouping

Another international study examined the overall attitudes of 1,500 teachers from 45 British secondary Schools (Hallam & Ireson, 2003). The authors looked at teacher attitude surveys designed to explore the correlations between teacher beliefs and practices with regard to teaching in settings with mixed-ability students, partially-grouped students, or totally set (homogeneous) groups. The results revealed significant differences in teacher attitudes toward ability grouping based on type of setting, content area, and level of education. While the perceived benefits of teaching in a mixed-ability environment tended to decrease with the increased years of experience in such an environment, teachers with higher levels of education tended to favor ability grouping to a lesser degree.

Hallam and Deathe (2002) also examined the connections between grouping and attitudes but this time focused more on student attitudes than on teacher attitudes. Two hundred and thirty-four students in Grades 7-10 completed surveys to provide information about their perceptions of ability grouping and achievement. Higher ability groups were found to have better self-concepts, and many students from the lower ability groups expressed a desire to move to a higher set. The main reason expressed by the majority of these students (44%) was that their current tracks were "too easy." The authors drew two interesting conclusions based on their research. First, there existed a direct negative correlation between the time students spent in set ability groups and their self-concepts. The multivariate analysis found a significant effect of ability setting on student attitudes toward schooling. While students in the highest ability groups exhibited the highest degree of positive attitudes toward school, the lowest ability groups also reported the least positive attitudes toward school and schooling.

With a well-earned reputation as a spokesperson against ability grouping, Jeannie Oakes (2008, 2005, 1997, 1993, and 1985) has often researched the cultural and political ramifications of ability grouping. Much of her research has examined the barriers to "de-tracking" schools. Oakes et al. (1997) have also carefully studied the attitudes of teachers, administrators, parents, and students toward different types of grouping arrangements for students. What the studies have often revealed is that the majority of students who are placed in the lower tracks are of minority origin, disenfranchised from society, or of lower socioeconomic status. One of the key concepts explored in her research is the issue of power in the educational system. Oakes, like Slavin (1990), concluded in her latest research on tracking that simply re-grouping students will have little effect on overall achievement. Tracking or de-tracking entails more of a philosophy of education and embodies many of the values of education held by individual educators and policyholders within school systems.

Small Learning Communities and Academies

Since the emphasis on high school reform that came with the 1996 and 2004 *Breaking Ranks* documents and the resulting funding boost from the Bill and Melinda Gates Foundation for restructuring high schools, new research has begun to emerge on the effectiveness of small learning communities and high school academies (Oxley, 2005; Ravitch, 2006). These communities or academies often take on different forms from one school to another, but generally share at least some of the following characteristics: a wing or section of the building designated for these students, students grouped into cohorts of 90-200 students taught by core teachers, common planning and collaboration time for teachers, and a level of commitment by teachers and faculty to help these students succeed (Black, 2004; Chmelynski, 2004; Cotton,

2001). While much of the research dedicated to small learning communities and academies focuses on the 9th grade level, many of these tenets can be applied to other grade levels as well. Some of the following studies outline the current research on this structural reform model.

Of special interest for this study, was research conducted by Hendrix (2007) comparing 208 students in traditional freshman classes to 413 students who were scheduled into freshman academies at similar schools. Hendrix found statistically significant differences at the .05 level in grade point average for students of high socioeconomic status; higher academic achievement on Algebra I Gateway scores for females, males, Caucasians, students of high socioeconomic status and students of low socioeconomic status; core credits earned in students of high socioeconomic status; attendance in females; and discipline referrals in males and students of low socioeconomic status (p. vi). Hendrix found no statistical difference in the number of credits earned or in the promotion rates of students in traditional settings compared to those in the academies.

Another important study (Delling, 2006) specifically addressed the differences in achievement--based on GPA, criterion-referenced, and other standardized tests--between academy-grouped students and non-academy grouped students. This study examined the archived test data of 400 students, 200 academy students and 200 non-academy students in California. Student questionnaires and classroom observations were used as qualitative pieces to triangulate the data. Delling noted that the academy students did score significantly higher on both the criterion-referenced tests and other standardized tests. The academy group also had statistically higher GPAs, thus concluding higher student achievement for academy students than for their non-academy peers. The important results from this study were that as noted by Ancess (2008), the academy structure itself could not be fully credited with creating these results. What

appeared to make the difference for these students was the “personalization practices” of the teachers working in the academy structure. The researcher concluded that the academy structure created a better atmosphere and culture for “good practice” on the part of the teachers and administrators than the non-academy structure. While these findings are relevant for our current study, they do not directly report on the interaction of the academy structure and the mixed-ability variable.

One of the original academy structures was developed as a “career academy” in the 1960s (Weyers, 2005). These types of academies have been used extensively throughout recent years as dropout prevention programs. Weyers studied the benefits of career academies in four urban comprehensive high schools on postsecondary student success. This study reported the survey results of 600 academy and non-academy graduates. A sampling of students was then selected for follow-up surveys. The research concluded that the academy structure did, in fact, have some bearing on the graduates’ experiences after high school. Additional differentiated experiences were noted for males and females, with females having more opportunities for job shadowing and entry into the 2-year college system. Students in the healthcare and international business academies appeared to benefit the most from their academy experiences, and academy students were found to be more likely to pursue higher education than their non-academy peers.

While the above mentioned studies tend to support the use of academies to increase student achievement, one study (Cramer, 2006) reported a negative effect resulting from the academy or small learning community structure. It should be noted, however, that this study compared 20 large high schools in California receiving federal funds for the implementation of small learning communities (SLCs) to 38 large high schools not implementing small learning communities. A California State Department of Education accountability index was used to

calculate the ANCOVA results. The researcher reported that based on the state calculations, the non-small learning community schools actually outperformed the small learning community schools on academic achievement for a statistically significant negative effect of the SLCs. The mixed results of this study call into question the full implementation of these small learning communities or academies as they tend to morph into a wide variety of structures according to specific schools' needs, resources, and philosophies.

The issue of teacher and administrator beliefs was studied by McDaniel (2008) through a comparative case study method, which addressed the perceptions of students and teachers after the first year of implementing a 9th grade academy or school within a school model. McDaniel used focus group interviews and open-ended surveys to capture the beliefs and perceptions of the students and teachers involved in this implementation. Issues of equity and consistency were explored, and McDaniel reported that while the academies did address many of the concerns of faculty members and the administration, it did not solve issues of discipline, attendance, and dropouts and that these issues would have to be further studied using quantitative analysis.

High-Stakes Testing

Even though attitudes toward schooling may differ among various groupings of students, motivation to learn is of increasing concern to most educators. Amrein and Berliner (2003) explored the correlation between high-stakes testing and student motivation to learn. The study looked specifically at students in the United States and sought to report the effects of high-stakes testing on the incidences of school dropouts. Amrein and Berliner reported that 18 states currently require successful completion of exit exams in order to be eligible for graduation. They also noted that these tests decrease student motivation, increase the number of high school

dropouts, fail to create improvements in other national assessments, and narrow the curriculum. One interesting statistic cited by the authors was that 88% of those states with high school exit exams in place had higher dropout rates than states not requiring such tests.

Amrein and Berliner (2003) also noted that the tests do not boost overall student achievement as measured by other national assessments such as the SAT, ACT, Advanced Placement (AP) tests, and the National Assessment of Educational Progress (NAEP). The study used an archival time-series analysis to compare data and reported some states such as New York actually showed a decrease in overall achievement after implementing exit exams. Some states did show short-term effects as calculated by researchers, but no significant gain was reported for those states using graduation exams. The final point expressed by the authors in the study was that the benefits of high-stakes testing do not appear to be worth the detrimental effects that they are having on the process of schooling as a whole, including decreased motivation, student apathy, and increased dropout rates (Gordon & Reese, 1997).

Other researchers have reported results that claim increased achievement in states with exit exams in place (Bishop et al., 2001). These authors claimed that the exams encourage all students to meet the most basic of standards for receiving a high school diploma. In their exploration of accountability systems, the authors cited that states with graduation exams showed a significant increase (2 to 4%) in 8th grade students who went on to attend college after high school. The authors also tied achievement to grades and stated the claim that the students maintaining a C average or above at the 8th grade level were 6% more likely to attend college. Much of the evidence presented by the authors is in direct contrast with several other studies on exit exams, achievement, and student motivation. The claim is made that state-mandated exit exams are solid means for assessing students and holding school systems accountable.

More recent research on high school exit exams conducted by the Center on Education Policy (2007) reported four key findings:

1. High school exit examinations have a significant impact on American education. Today, 65% of all students in the nation are in the 22 states with such policies. By 2012, when 4 more states implement such policies, approximately 76% of all students will be affected.

2. The impact of exit exams is even more striking for students of color. Today, 76% of students of color are in states that require passage of exit exams; by 2012 more than 82% of students of color will be in such states.

3. Exit exams are aligned, for the most part, to Grade 10. Although the majority of states (19) currently implementing or planning to implement exit exams use the same exam to fulfill the No Child Left Behind (NCLB) testing requirements, 10 states have lower cut-off scores for their high school graduation requirement than for NCLB purposes.

4. Eighteen states reported that the purpose of the exit exam is to determine mastery of the state curriculum (e.g., standards, curriculum frameworks). Only a few states reported that the purpose is to determine graduates' readiness for entry-level employment (9) or postsecondary education (6). These findings raise questions about the rigor of state standards and exit exams, and highlight a need to re-examine the purposes of state exit exams. (p. 1)

Special Populations

While some researchers like Bishop et al. (2001) have reported the benefits of high-stakes testing, others have conducted studies dealing with the detrimental effects of high-stakes testing on different populations of students (Harlen, 2003; Horn, 2003; Jacob, 2001). Two of the most repeatedly studied variables associated with high-stakes testing in the past few years have been student motivation and dropout rates. Students experiencing the most difficulty with these exams are often the disabled, English language learners, and minorities (Amorosino, 2003; Nelson & Turnbull, 2002; O'Neill, 2003; Winters & Forster, 2004; Wasburn-Moses, 2003). These studies have reported significant differences in the number of "regular" students passing graduation exams as compared to special populations. As O'Neill (2003) has pointed out, these "failures"

are of increasing concern because of issues of equity and the number of legal cases currently involving students who were denied diplomas despite verifiable disabilities.

Albrecht and Joles (2003) explored the ramifications of using a single high-stakes test for measuring the achievement of disabled students. Their study examined the position of high-stakes testing such as graduation exams in the world of No Child Left Behind. One of the claims made by the authors was that one mandated law directly conflicts with another. This assumption appears to be accurate considering the 2004 reassessment of graduation requirements for Alabama students with certain learning disabilities and the 2008 implementation of the Credit-Based Diploma option available to all students. With this diploma option, students who pass reading, math, and one other subtest may still earn a diploma and participate in the graduation ceremony. Students with verifiable disabilities in reading or math and who have been receiving accommodations in these areas may substitute another subtest such as science or social studies for their area of disability. Albrecht and Joles (2003) specifically dealt with reliability and validity of the state tests for disabled students and claimed that the "norm" group often does not include peers of disabled students. The study calls for more research to be conducted in the practice of employing high-stakes testing to hold schools accountable for student achievement.

Summary

With all these aspects of testing and grouping taken into consideration, it is important to explore how these two variables interact within a complex educational setting to influence achievement. As many researchers have pointed out (Ancess, 2008; Cramer, 2006; Marzano, 2003; Rubin, 2008; Slavin, 1990), no single small change will make much difference in student attainment, but when taken in conjunction with other researched-based approaches, all students

should be able to strive to achieve given genuine and rigorous opportunities to learn. Reconsidering ability grouping and the emphasis placed on high-stakes testing is a good launching point for restructuring educational equity and opportunities for all students to succeed.

CHAPTER III

METHODS AND PROCEDURES

Introduction

Within the context of the review of literature, several key concepts were considered for the design of this research study. Taking into consideration the complexity of teaching in today's culture, it was imperative that the design of the study account for a variety of variables affecting the overall outcome of the research. As mentioned earlier, it seems apparent that given the complexity of any educational setting that the likelihood of documenting significant change in achievement was very small if only one variable was altered. In other words, it will take more than implementing a single factor of research-based approaches to increasing student achievement: mixed-ability grouping, motivational strategies, teacher collaboration, inquiry-based cross-curricular planning, and student engagement (Ancess, 2008; Joyce & Showers, 2002; Slavin, 2000). If these and other factors are taken into account, and if the teacher behaviors change along with these new structures, then there is a greater likelihood of increased student achievement (Joyce & Showers, 2002; Marzano, 2003; Slavin, 2000). This chapter will serve to outline the connections between the relevant research that has already been conducted in the areas of high-stakes testing and student grouping and then merge these connections with the specific setting, participants, design, procedures, and analyses used for the study.

Purpose of the Study

As described in chapter I, the purpose of this study was to determine the relationship between a quasi-academy small learning community structure of heterogeneously grouped students and success rates on high-stakes exit exams and performance-based holistic writing assessments. The analyses and results will be useful for educational leaders in making decisions regarding the continuation of the academy structures given the current changes to Alabama diploma options and the implementation of First Choice, a policy that calls for all 2009 entering freshmen to begin their high school careers on the Alabama High School Diploma with Advanced Academic Endorsement option as the default diploma choice. With these changes, it will be even more important to consider the most effective means of grouping students for increased success. If all students across the state will begin high school on the "advanced" diploma, then it is imperative that policymakers and administrators examine the best structures and support systems available to help theses students succeed. The same holds true for students in other states who are working toward high school graduation in a time of global change and economic uncertainty.

Research Questions

The following research questions were addressed in the study:

1. Is there a correlation between student grouping (academic/vocational tracked or mixed-ability detracked) and passing rates on the language, reading, and social studies portions of the Alabama High School Pre-Graduation Exam (AHSGE)?

2. Is there a connection between student grouping (academic/vocational tracked or mixed-ability detracked) and student levels of writing attainment as measured by holistic scores on the Alabama Direct Assessment of Writing (ADAW)?

3. Does the change from traditional academic/vocational tracks to a mixed-ability detracked student grouping create any changes in the beliefs, perceptions, and educational practices of teachers working within these educational contexts?

These questions were addressed using a variety of quantitative and/or qualitative research designs and analyses to be outlined in further sections of this chapter.

Setting of the Study

The study was set in a small, rural Grades 7-12 high school in a county school system in Central Alabama. The county was established primarily by soldiers from Tennessee in 1818 and lies in the Cumberland Plateau (Chamber of Commerce, 2008). According to the Chamber publication, the county site for the study has the "sixth fastest growing population in the state" (p. 48). Population currently exceeds 57,000 residents. The general population characteristics include 90.7% White, 1.5% Black, 1.4% Other, and 6.4% Hispanic. Many of the citizens (23.5%) are under the age of 25, and the county school system is the largest employer in the county. According to the 2007 Alabama Kids Count Databook--as cited in the Chamber document--"the county was ranked as the second best Alabama county in which to rear a child" (p. 50). This ranking is based on 19 factors, including single-parent families, children in poverty, infant mortality rate, low weight births, child health index, births to unmarried teens, child death rate, preventable teen death rate, vulnerable families, event dropout rate, projected dropout rate, and other factors.

The specific school site chosen for this study (referred to as Academy High throughout this document) is the only school in the system utilizing a mixed-ability academy approach at the sophomore level. The other five high schools in the county system and the single high school in the city system continue using a more traditional scheduling approach with students and parents self-selecting either an “advanced” diploma pathway of college preparatory courses or a “standard” diploma pathway, which generally includes a vocational training element.

Academy High is the hub of a town with a population of slightly over 1,200 with 441 households. The student and community populations similarly reflect the county population as a whole. The student population is 95% Caucasian and 5% Hispanic. The community itself is 17% Hispanic according to the latest figures available. The original school was built in 1937 as a K-12 facility but split with the K-6 school at the beginning of the 2000-2001 school year (Self-Evaluation and School Improvement Report for the Southern Association of Colleges and Schools, 2002-2003).

Academy Intervention

In order to fully understand the academy intervention being examined in this study, it is important to point out the exact processes and procedures that went into its development. Small learning communities and academies have been used increasingly in the past 2 decades to decrease dropout rates and improve graduation rates. As a high school reform initiative, these structures overall have shown promise for increasing student achievement and high school success (Anderle, 2008; Chmelynski, 2004; Conrad, 2007; Cramer, 2006; Delling, 2006; Hendrix, 2007; Hertzog & Morgan, 1997, 1998; McDaniel, 2008).

The exact academy structure in question here shares many of the characteristics with the studies cited above, but several key factors are unique to this study site. First, the academy structure being studied here began with 10th grade students during the 2004-2005 school year as a result of a teacher-inquiry study group's recommendation. Due to scheduling restrictions, students could only be scheduled into an academy structure for the first three periods of the school day. The initial academy groups were painstakingly hand-scheduled into three equal mixed-ability groups for English, computer, and social studies. As with the structure recommended in the research, the academy students were also scheduled into one wing of the school building, which put classes and teachers literally "next door" for increased collaboration and collegiality.

The three teachers were dedicated to the idea of improvement reform and to the idea of helping all students succeed. Teachers shared common planning time and met weekly to discuss student progress. Cross-curricular planning, book study, and lesson plan study were all parts of the original structure. Teachers employed Marzano's Essential Nine Strategies from *Classroom Instruction that Works* throughout the year, focusing on one strategy each month (Marzano, 2003). Motivational strategies were employed to help increase student buy-in and stamina. This became especially important for the "standard" students who had not been held to this level of expectations in the past.

In order to build in better curricular alignment, the academy teachers led the entire faculty in a curriculum mapping project using two texts by Heidi Hayes Jacobs. Redundancies and gaps in curricula were identified and addressed in order to maximize instructional time. Teachers studied state standards, item specifications, and non-mastery reports in order to familiarize themselves better with the expectations for state assessments.

At the same time, the school as a whole began addressing student engagement school-wide and began a project to increase student input into curricular decisions. A series of short electives was developed based on student interests as a means of remedying the serious lack of electives and extracurricular options offered at many small, rural schools. All of these efforts plus additional infusions of technology such as data projectors, on-line learning modules, student responders, and video-editing were used to boost student achievement. While a true academy structure was not fully in place, most of the primary tenets were included in this improvement initiative.

Study Subjects

The population for this study was composed of six cohorts of students as they passed through the 10th grade and participated in the Alabama High School Pre-Graduation Exam and the Alabama Direct Assessment of Writing. Each cohort contained roughly 70 students broken down into three class "sections." During the first year of the academy structure, students were intentionally detracked and re-grouped for social studies, English language arts, and computer classes. The existing "tracked" groups of "advanced" and "standard" students were dissolved for three class periods of a traditional seven-period day. Students were ranked and subsequently assigned to three mixed-ability groups of nearly equal size. Group formation was controlled using a class-ranking system so that each group fell within one grade percentage point of the other. Groups were also further manipulated based on teacher and principal suggestions for personality, gender, and special education population balance, but the original grade point percentages were maintained as closely as possible.

With the exception of six Hispanic students in the original academy group, all other students were White, non-Hispanic. The majority of students were from the lower to lower-middle socioeconomic range. The initial academy group in 2004-2005 consisted of 38 females and 39 males--most between the ages of 15 and 16. Eight students had been identified with special learning needs and received special education services. Thirty of the 77 (40%) students received free or reduced school lunches. Subjects for the continued data analyses similarly reflect the make-up of the initial group.

Even though the original study population began with a total of 426 students, after using the selection criteria of participating in the English, reading, and social studies portions of the state graduation exam, the numbers decreased by several students as reflected in the differences between Table 2 and Table 3. The totals from Table 3 reflect the number of students actually included in the quantitative analysis.

Table 2

Original Study Population

Academic Year	Male	Female	Free/Red.	Minority	Spec. Ed.	Total
2001-2002	39	32	18	6	14	71
2002-2003	33	36	22	6	7	69
2003-2004	34	35	25	6	7	69
2004-2005	38	39	30	6	8	77
2005-2006	43	32	22	2	14	75
2006-2007	35	30	30	8	11	65
Totals	222	204	147	34	61	426
Total Percentages	52	48	35	8	14	100

Table 3

Study Subjects Meeting All Selection Criteria

Academic Year	Total
2001-2002	56
2002-2003	63
2003-2004	61
2004-2005	65
2005-2006	68
2006-2007	58
Total	371

Methods and Purpose

Due to the time period and nature of the school improvement strategy under study, it was not possible to create a research design with a random sampling with both an experimental and a control group. Academy High is also a small, rural high school and the only school in the district employing the academy structure; therefore, it was not possible to build a larger *N* group for this study. The entire population of students who met the study criteria for the years addressed were included. What was used within this context, however, was purposeful sampling and a quantitative causal-comparative research design based on three baseline groups before the academy structure was employed (2001-2002, 2002-2003, and 2003-2004) using archival data and retrospective analyses (Champion, 2002; Hendrix, 2007). The academy structure was considered the "intervention," and the independent variable was whether or not the students were grouped into the mixed-ability academy structure or in the traditional standard or advanced structures. This broke the subjects into two subgroups: those students who were part of the traditional structure of standard and advanced groupings (the 180 students in the three cohorts prior to the implementation of the academy) and the students who spent three out of seven periods of the school day in academy classes (the remaining 191 students). Because there was no

experimental manipulation of the independent variable, what was of primary concern was the educational value of the academy structure for the students at this study site. With all Alabama freshmen beginning the 2009 school year on the Alabama High School Diploma with an Advanced Academic Endorsement, there are several implications for the resulting analyses of this study, especially the issues around grouping students for optimal achievement opportunities.

Students from these six cohorts were then cross-referenced with actual pass/attempt score reports from their first attempt on the Alabama High School Pre-Graduation Exam. These students were also referenced for results on the Alabama Direct Assessment of Writing from levels 0-4. Data from students who were part of the 10th grade class homerooms and who had results on both exams were included in the study.

In order to gain a better understanding of the analyses conducted, results were triangulated with teacher survey questions and focus group discussions using a standardized and research-based protocol in order to link the qualitative and quantitative designs (Lincoln & Guba, 1985; Miles & Huberman, 1994). Other types of qualitative data included informal conversations with academy teachers, field notes, lesson plans, and curriculum maps.

It is also important to consider in this section the position of the researcher throughout this process. As one of the academy teachers during the first 2 years of the school improvement initiative, the researcher learned firsthand the challenges associated with changing tradition and breaking with the past. The researcher worked as a key member of the collaborative inquiry group, which looked at academy structures and made recommendations to re-group students during part of the school day based on mixed-ability groupings. After leaving Academy High, it was feared that the short period of the academy groupings would also come to an end and that a decision would be made to return to an easier and more traditional grouping approach. The

positive social, cultural, and academic results, however, coupled with the input from the other academy teachers and a supportive administration, resulted in the continuation of the academies. As the primary researcher, a keen awareness has been cultivated regarding researcher bias and positionality. Being 4 years removed from the actual beginning of the process has helped foster an increased objectivity and has allowed a position and protocol in this study that works to counter any researcher biases that might affect the outcomes. Using specified protocols and remaining open to the questions of fellow researchers helped in maintaining the objectivity necessary to conduct the research in a professional and non-personal manner (McEwan & Bull, 1991; Miles & Huberman, 1994; Nisbett & Ross, 1980; Ross & Lepper, 1980).

The following information on reliability and validity of the achievement measures was provided upon request by the Alabama State Department of Education's Assessment Department:

Alabama High School Graduation Exam

The State Department of Education conducted several validity studies related to the *Alabama High School Graduation Exam* (AHSGE). One such study was an instructional validity study for the AHSGE to ensure that students received instruction on the content standards prior to being tested. Content teachers completed a survey that asked if they had taught each content standard and students completed a survey that asked if they had been taught each content standard.

To ensure content validity and fairness, all test items were submitted to both a content and a bias committee for review. These committees consisted of Alabama educators from school districts throughout the state. The primary responsibility of the content review committee was to

evaluate the quality and content classification of each item. Committee members reviewed items for accuracy, grade-level appropriateness, estimated difficulty, depth-of-knowledge, and source of challenge. The primary responsibility of the bias committee was to evaluate items as to acceptability with regard to bias and sensitivity issues. The committees were encouraged to suggest revisions and to make recommendations for reclassification of items to different standards, as appropriate. At the culmination of the item reviews, all items that were presented to the committees for review were accepted, accepted with revision(s), or rejected.

Test reliability refers to the expected consistency of test scores. Although a number of reliability indices exist, a frequently reported index for achievement tests is Coefficient Alpha. This index is the one reported for the AHSGE. Alpha indicates the internal consistency over the responses to a set of items measuring an underlying trait. From this perspective, Alpha can be thought of as the correlation between scores if the students could be tested twice with the same instrument without the second testing being affected by the first.

Alabama Direct Assessments of Writing

To ensure content validity and fairness, all writing prompts were submitted to both a content committee and a bias committee for review. These committees consisted of Alabama educators from school districts throughout the state. The primary responsibility of the content review committee was to evaluate the quality and content of each prompt. Committee members reviewed prompts for grade-level appropriateness and estimated difficulty and mode appropriateness. The primary responsibility of the bias committee was to evaluate items as to acceptability with regard to bias and sensitivity issues. The committees were encouraged to suggest revisions and to make modifications to the prompts, as appropriate. At the culmination of

the prompt reviews, all prompts that were presented to the committees for review were accepted, accepted with revision(s), or rejected.

To ensure reliability of the hand-scoring process of the Alabama Direct Assessments of Writing, a multi-tiered process was implemented that included two readers for each prompt. Initially, readers were trained using rubrics, anchor papers, and sample student papers. Readers must qualify to score Alabama prompts. Reader status reports are available that show both daily and cumulative data.

During the project, validity responses were scored each day. These clear cut, typical responses were submitted to readers to detect drift from the scoring criteria. Any readers who received less than acceptable correct scores were retrained, monitored, and/or released.

Also, recalibration sets, which consist of close call responses, were randomly distributed among readers throughout the scoring process. Again any readers who received less than acceptable correct scores were retrained, monitored, and/or released.

Finally, team leaders randomly read behind readers to ensure that they were on target. Once again, readers who received less than acceptable correct scores were retrained, monitored, and/or released.

Data Collection

After securing permission from the dissertation committee, the researcher began the process of completing the IRB request to collect retrospective data and teacher survey data. Letters of permission on school and school board letterhead were acquired from the school under study and from the superintendent of the school system (See Appendix A). Once these permissions were granted, the researcher began the data collection process.

Student rosters were pulled from School Technology Incorporated STI® Office and then coded to provide added privacy and security. Information was only shared with the dissertation committee and school employees who already had access to this information, and none of this data included student identifiers. A database was generated, which allowed for ease of data entry as well as import/export capabilities into the analysis software package. Data remained securely stored and will remain on file for 5 years following the completion of the study, after which time will be destroyed.

Roster lists were compared to Alabama High School Graduation Exam (AHSGE) and Alabama Direct Assessment of Writing (ADAW) test result lists in order to solidify a final list of students qualifying for inclusion in the study. After discussions with research professors and research assistants, final decisions were made regarding the most reliable approaches to inputting the data and which assumptions must be controlled for and which statistical tests provided the most useful results for this study. It was also decided that sufficient numbers of special education students did not exist in the pre and post groups for running a reliable analysis. It was also determined with the help of the committee that since the Alabama Direct Assessment of Writing was not administered to the first two cohort groups, that this data should only be reported as descriptive statistics due to the uneven number of subjects.

Survey questions were also administered to past and present academy teachers through the use of Web 2.0 technologies since new ideas have recently been emerging on the usefulness of Web 2.0 tools for collecting qualitative data (e.g., Wordpress.com; Anjewierden & Efimova, 2006). For this research, teachers used a reflective blog for answering 15 survey questions posted over a period of 3 weeks (see Appendix B). This approach allowed for further prompting from the researcher as well as a sharing of ideas among the participating teacher subjects. Qualitative

protocols were suggested by the dissertation committee and supported through the qualitative framework provided by Miles and Huberman (1994). Teachers were able to respond to the survey questions with the understanding that their names would not be associated with their personal reflections and that they would only be identified with the word “teacher” and a number.

Field notes from planning sessions and professional learning community meetings, agendas, lesson plans, and curriculum maps were also gathered and organized into a body of evidence for analysis that further link the qualitative data with the quantitative results (Miles & Huberman, 1994). This data was then used to further verify patterns of change in teacher beliefs and practices as a result of working in the academy structure.

Data Analysis

Data were first coded into a Microsoft Excel spreadsheet and then imported into the SPSS® computer software package for analyses. The chi-square test of association was run to determine the association among the differing variables. This test revealed information which allowed for interpretation regarding the association between being scheduled into traditional standard/advanced groups or mixed-ability academy groups and the other variables. While it would not be advisable to deduct that the academy structure caused any change in achievement, it was possible to discern if an association did, in fact, exist and whether or not it was statistically significant (Lomax, 2001). Based on initial chi-square analysis, a further test of proportions was run to determine which groups demonstrated the greatest gains as a result of the academy structure and its accompanying intervention factors (Gall, & Borg, 1989).

The dependent variables in the study for the chi-square analysis were reading (pass/fail), language (pass/fail), and social studies (pass/fail). Independent variables for the analysis included pre-academy intervention (first 3 years of data) or post-academy intervention (last 3 years of data), gender (male/female), and socioeconomic standing (free or reduced lunch/not free or reduced lunch).

Pre-existing data for three portions of the Alabama High School Pre-Graduation Exam were also analyzed for overall patterns based on student exposure to the academy intervention. The analysis was conducted to see if an effect could be noted for the use of the mixed-ability academy groups on the success rates for the English, reading, and social studies portions of the Alabama High School Graduation Exam.

Existing 10th grade group scores on the Alabama Direct Assessment of Writing were also compared to the scores of the mixed-ability academy students as descriptive statistics only. These scores were examined based on the holistic rankings, and specific variations were measured based on the number of students scoring at levels 0 through 4.

The dependent variables for the English, reading, and social studies sections of the Alabama High School Graduation Exam were run for disaggregation according to gender and socioeconomic status. The independent variable included participation or lack of participation in the mixed-ability academy grouping structure.

Results for the mixed-ability grouping approach for increasing student success rate on the Alabama High School Pre-Graduation Exam were analyzed using a 2-samples proportion hypothesis test. Data were analyzed for significance at the *.05* level on all variables in order to determine whether the mixed-ability grouping affected overall student success rates on the pre-graduation exam. One basic null hypothesis was tested:

H_{01}: There is no statistically significant difference in student passing rates on the Alabama High School Graduation Exam for students scheduled into mixed-ability academies.

Qualitative data sets were gathered from teacher survey responses and a focus group discussion, field notes, lesson plans, and curriculum maps and then compiled, coded, and analyzed using NVivo8 and also hand-coding for evidence of attitudinal changes stemming from the implementation of the academy structure. Miles and Huberman's (1994) three-step approach of data reduction, data display, and conclusion drawing and verification was used as a basic qualitative framework. An additional framework for qualitative analysis is provided in the section below on multiple measures of data. Teacher feedback regarding any changes in teaching philosophy and/or methodology was of special interest, as it is considered that the academy structure may promote more collegiality and differentiated instruction.

Framework for Organizing and Contextualizing Results

As Miles and Huberman (1994) have pointed out, it is imperative that the researcher find a method for managing large amounts of data as well as the conclusions to be drawn from them. With this in mind, the Multiple Measures of Data model provided by Dr. Victoria Bernhardt (Figure 1) provides a framework that has been useful throughout the various stages of this research project. The model has been successfully used at the study site and at other school sites across the state to focus and guide continuous school improvement.

For practitioners especially, Bernhardt's model provides an easy-to-understand and clearly outlined framework for gathering, analyzing, and acting upon school data in order to drive instruction and foster continuous school improvement. The model has four main categories of data: demographics, perceptions, student learning, and school processes. Each type of data

offers specific insights into areas for improvement, and the points of interaction between the four data types provide even further insight into focus areas for improvement.

Demographic information includes student enrollment, attendance, drop-out rate, ethnicity, gender, and grade level. As Bernhardt points out in her model, this data tells us more about a school and how it changes over time. Perceptual data may include sources such as perceptions of the learning environment, values and beliefs, attitudes, and observations. Specific information may be gained by looking at the school's statements of mission, values, and beliefs. Additional information about the climate and culture may also be garnered from simply being present in a school or research setting and listening to students, teachers, and administrators express their opinions and beliefs. This perceptual data provides insights that cannot be gained from solely looking at the numbers represented in the demographic and student learning data.

Demographic and perceptual data sets are crucial for helping us contextualize the third measure of data: student learning data. These data sets include standardized test results, norm and criterion-referenced tests, teacher observations, and formative assessment results. This is the data that often drives student, teacher, and even school accountability and helps us measure whether or not students are, in fact, improving as based on these definitions of achievement.

The final, and sometimes overlooked measure of data as described by Bernhardt, is school processes. This measure includes a full description of current school programs as well as the educational policies and processes in place. It is especially important for school officials and policymakers to understand this measure of data because these types of decisions often interact with the other measures of data.

It is in these interactions that we see even greater opportunities to gain a better understanding of any given phenomenon that interests us for research purposes. For example, the

areas where these measures of data connect and overlap may tell us more about student likes and dislikes, differing school experiences for different groups of students, student perceptions about school climate, effectiveness of specific interventions, and student engagement. At the very heart of all four measures of data, we may have enough information to make decisions about whether or not a program is effective with students and further predict changes that may bring about even greater improvement. To provide a concrete example, it is at the intersection of demographic data (who our students are and how this make-up has changed over time); perceptual data about high school dropouts on the part of students, teachers, and administrators; student learning data about graduation rates; and school policies and processes related to promotion and retention, attendance, credit recovery, and other opportunities that we truly see whether or not everything is in place to set students up for success. As Balfanz et al. (2009) noted, it is often the very rigid policies and processes with no room for student recovery and not the indicators of student ability that "push students out" of school and fuel the dropout crisis.

With this multiple measures framework in mind, data sets were gathered, organized, and reduced before and throughout the analysis process. Student demographic results on the study subjects were outlined earlier in this chapter. Perceptual data was gathered through an interactive 3-week reflective teacher blog and through a follow-up focus group meeting. Student learning data are presented extensively in both statistical and descriptive forms in chapter IV and then further contextualized using this multiple measures model in chapter V. School processes information regarding the academy intervention has been provided previously in this chapter, and further data for this measure emerged from the teacher reflections as reported in chapters IV and V.

This multiple method for examining data has provided a means of cross-referencing results in order to further contextualize the findings and better verify the conclusions that have been drawn for each of the research questions outlined.

Summary

Six years of retrospective data were collected and analyzed along with teacher survey and other qualitative data in order to determine whether a correlation existed between student grouping structures (traditional versus academy) and academic achievement as measured by the Alabama High School Pre-Graduation Exam. Qualitative data were used to determine whether the scheduling structure had any impact on teacher beliefs and practices.

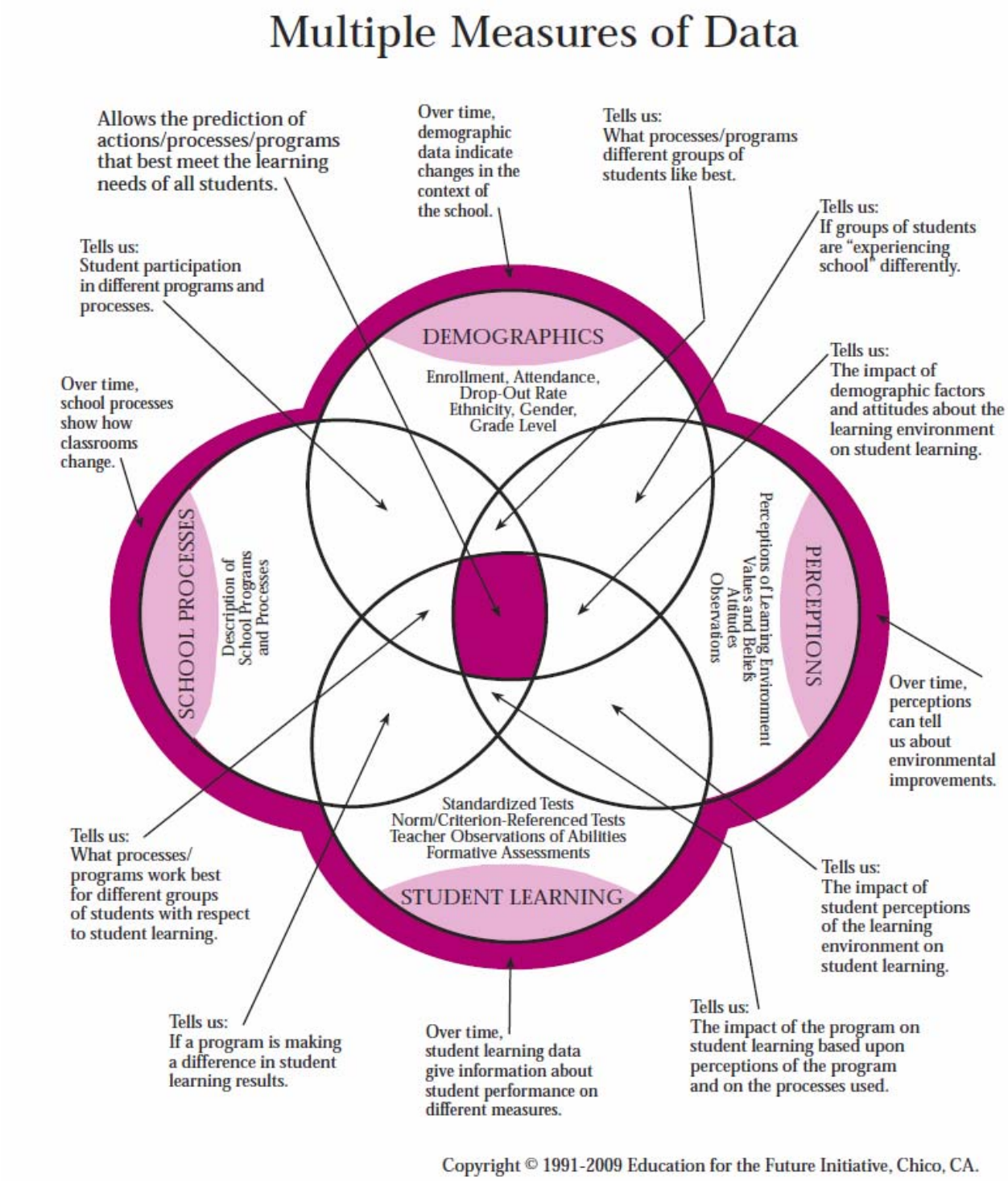

Figure 1. Multiple Measures of Data. (*Permission to use granted by Dr. Victoria Bernhardt.*)

CHAPTER IV

RESULTS

Overview

Data results from this mixed-methods study will be presented in chapter IV. Results are organized into tables and narratives depending on which method produces the most clarity and ease of reading. Qualitative data sets are presented based on the number of occurrences and emerging themes. Descriptive data sets are presented to help connect the quantitative and qualitative results as well as to tie these results to the original research questions.

Quantitative results are presented in a variety of sub-groups in order to fully address all variables in Research Question 1. The academy structure is presented as the "intervention" in all test results. Findings for Research Question 1 are presented in the following disaggregation: overall group, males only, non-low SES males (based on free and reduced lunch status), low SES males, females only, non-low SES females, and low SES females. Overall results, as well as results, for each sub-group will be presented and discussed. In later sections of this chapter, descriptive results will be presented to address Research Question 2 regarding student performance on the Alabama Direct Assessment of Writing based on pre-intervention and post-intervention groups. Qualitative data will address Research Question 3 regarding the changes in teacher beliefs, perceptions, and practices as a result of working in the mixed-ability academy structure.

Quantitative Results

All quantitative results in this section come from the Chi-Square analysis run from the original *N* group of 371 subjects from the three pre- and three post-academy intervention groups (Lomax, 2001). The following tables report *n* numbers for each sub-group and the resulting analysis for the three Alabama High School Graduation Exam subtests: reading, English, and social studies.

Table 4

Overall Results for Reading

Overall Results for AHSGE Reading			
		Intervention	
		Pre-Intervention	Post-Intervention
		Count	Count
Reading	Fail	58	42
	Pass	122	149

The above table reflects the entire group of 371 subjects as broken down into the number of students in the regular standard and advanced classes (pre-intervention) before the academy structure was introduced as the “intervention.” Results here show the number of students in both groups who failed and the number of students who passed the reading portion of the Alabama High School Graduation Exam.

Table 5

Pearson Chi-Square Tests for Reading

Pearson Chi-Square Tests		
		Intervention
Reading	Chi-square	4.928
	df	1
	Sig.	.026*

Note. Results are based on nonempty rows and columns in each innermost subtable.
*. The Chi-square statistic is significant at the 0.05 level.

The percentage of students passing reading in the post-intervention group did differ significantly from the percentage of students passing in the pre-intervention group, $X^2(1, N = 371) = .026$, $p < .05$. Since the Chi-Square for the overall group did reveal a significant difference for reading, the Comparison of Column Proportions was also run adjusting for pair-wise comparisons and using the Bonferroni correction.

Table 6

Comparison of Column Proportions for Reading

Comparisons of Column Proportions[a]			
		Intervention	
		Pre-Intervention	Post-Intervention
		(A)	(B)
Reading	Fail	B	
	Pass		A

Note. Results are based on two-sided tests with significance level 0.05. For each significant pair, the key of the category with the smaller column proportion appears under the category with the larger column proportion.
[a]. Tests are adjusted for all pairwise comparisons within a row of each innermost subtable using the Bonferroni correction.

The proportion who fail in the post-intervention group is smaller than the proportion who fail in the pre-intervention group. The proportion who pass in the pre-intervention group is smaller than the proportion who pass in the post-intervention group.

Table 7

Overall Results for Language

Overall Results for AHSGE Language			
		Intervention	
		Pre-Intervention	Post-Intervention
		Count	Count
Language	Fail	76	43
	Pass	104	148

This table reflects the same *N* for the language portion of the AHSGE, with 104 students passing in the standard/advanced groups and 148 students passing from the academy groups.

Table 8

Pearson Chi-Square Tests for Language

Pearson Chi-Square Tests		
		Intervention
Language	Chi-square	16.522
	df	1
	Sig.	.000*

Note. Results are based on nonempty rows and columns in each innermost subtable.
*. The Chi-square statistic is significant at the 0.05 level.

The percentage of students passing language in the post-intervention group did differ significantly from the percentage of students passing in the pre-intervention group, $X^2(1, N =$

371) = .000, $p < .05$. Since the Chi-Square for the overall group did reveal a significant difference for language, the Comparison of Column Proportions was also run for language.

Table 9

Comparisons of Column Proportions for Language

Comparisons of Column Proportions[a]			
		Intervention	
		Pre-Intervention	Post-Intervention
		(A)	(B)
Language	Fail	B	
	Pass		A

Note. Results are based on two-sided tests with significance level 0.05. For each significant pair, the key of the category with the smaller column proportion appears under the category with the larger column proportion.
[a]. Tests are adjusted for all pairwise comparisons within a row of each innermost subtable using the Bonferroni correction.

The proportion who fail in the post-intervention group is smaller than the proportion who fail in the pre-intervention group. The proportion who pass in the pre-intervention group is smaller than the proportion who pass in the post-intervention group.

Table 10

Overall Results for Social Studies

Overall AHSGE Results for Social Studies			
		Intervention	
		Pre-Intervention	Post-Intervention
		Count	Count
Soc. St.	Fail	62	42
	Pass	118	149

Overall results for social studies reveal that only 118 students from the three traditional standard/advanced groups passed as compared to 149 from the three academy groups.

Table 11

Pearson Chi-Square Test for Social Studies

Pearson Chi-Square Tests		
		Intervention
Soc. St.	Chi-square	7.126
	df	1
	Sig.	.008*

Note. Results are based on nonempty rows and columns in each innermost subtable.
*. The Chi-square statistic is significant at the 0.05 level.

The percentage of students passing social studies in the post-intervention group did differ significantly from the percentage of students passing in the pre-intervention group, $X^2(1, N = 371) = .008$, $p < .05$. Since the Chi-Square for the overall group did reveal a significant difference for social studies, the Comparison of Column Proportions was also run for social studies.

Table 12

Comparison of Column Proportions for Social Studies

Comparisons of Column Proportions[a]			
		Intervention	
		Pre-Intervention	Post-Intervention
		(A)	(B)
Soc. St.	Fail	B	
	Pass		A

Note. Results are based on two-sided tests with significance level 0.05. For each significant pair, the key of the category with the smaller column proportion appears under the category with the larger column proportion.
[a]. Tests are adjusted for all pairwise comparisons within a row of each innermost subtable using the Bonferroni correction.

The proportion who fail in the post-intervention group is smaller than the proportion who fail in the pre-intervention group. The proportion who pass in the pre-intervention group is smaller than the proportion who pass in the post-intervention group.

Table 13

Males Only Reading

Males Only Reading			
		Intervention	
		Pre-Intervention	Post-Intervention
		Count	Count
Reading	Fail	39	34
	Pass	57	68

The Chi-Square analysis for males only (n = 198) shows that while fewer post-intervention students failed the reading portion of the AHSGE, the difference was not statistically significant as seen in Table 14 below.

Table 14

Pearson Chi-Square for Males Only Reading

Pearson Chi-Square Tests		
		Intervention
Reading	Chi-square	1.130
	df	1
	Sig.	.288

Note. Results are based on nonempty rows and columns in each innermost subtable.

The percentage of students passing reading in the post-intervention group did not differ significantly from the percentage of students passing in the pre-intervention group, $X^2(1, N =$

198) = .288, $p > .05$. Since the Chi-Square for the overall group did not reveal a significant difference for reading, the Comparison of Column Proportions does not show statistically significant results.

Table 15

Males Only Language

Males Only Language			
		Intervention	
		Pre-Intervention	Post-Intervention
		Count	Count
Language	Fail	48	33
	Pass	48	69

Table 16

Pearson Chi-Square Test for Males Only Language

Pearson Chi-Square Tests		
		Intervention
Language	Chi-square	6.371
	df	1
	Sig.	.012*

Note. Results are based on nonempty rows and columns in each innermost subtable.
*. The Chi-square statistic is significant at the 0.05 level.

The percentage of male students passing language in the post-intervention group did differ significantly from the percentage of male students passing language in the pre-intervention group, $X^2(1, N = 198) = .012$, $p > .05$. Since the Chi-Square for the overall group did reveal a significant difference for language, the Comparison of Column Proportions was also run for language.

Table 17

Comparison of Column Proportions for Language

Comparisons of Column Proportions[a]			
		Intervention	
		Pre-Intervention	Post-Intervention
		(A)	(B)
Language	Fail	B	
	Pass		A

Note. Results are based on two-sided tests with significance level 0.05. For each significant pair, the key of the category with the smaller column proportion appears under the category with the larger column proportion.
a. Tests are adjusted for all pairwise comparisons within a row of each innermost subtable using the Bonferroni correction.

The proportion who fail in the post-intervention group is smaller than the proportion who fail in the pre-intervention group. The proportion who pass in the pre-intervention group is smaller than the proportion who pass in the post-intervention group.

Table 18

Males Only Social Studies

Males Only Social Studies			
		Intervention	
		Pre-Intervention	Post-Intervention
		Count	Count
Soc. St.	Fail	28	24
	Pass	68	78

The number of male students passing social studies in the post-intervention group did not differ significantly from the number of male students passing in the pre-intervention group, $X^2(1, N = 198) = .368$, $p > .05$. Since the Chi-Square for the overall group did not reveal a

significant difference for social studies, the Comparison of Column Proportions does not reveal any level of significance.

Table 19

Pearson Chi-Square for Males Only Social Studies

Pearson Chi-Square Tests		
		Intervention
Soc. St.	Chi-square	.812
	df	1
	Sig.	.368

Results are based on nonempty rows and columns in each innermost subtable.

Table 20

Non-low SES Males Reading

Non-low SES Reading			
		Intervention	
		Pre-Intervention	Post-Intervention
		Count	Count
Reading	Fail	25	21
	Pass	47	51

Table 21

Pearson Chi-Square Test for Non-low Males Reading

Pearson Chi-Square Tests		
		Intervention
Reading	Chi-square	.511
	df	1
	Sig.	.475

Note. Results are based on nonempty rows and columns in each innermost subtable.

While the number of non-low SES male students passing reading in the post-intervention group is slightly higher, results were not statistically significant, $X^2(1, N = 144) = .475$, $p > .05$. Since the Chi-Square for the non-low SES male group did not reveal a significant difference for reading, the Comparison of Column Proportions was not significant either.

Table 22

Non-low SES Males Language

Non-low SES Males Language			
		Intervention	
		Pre-Intervention Count	Post-Intervention Count
Language	Fail	31	23
	Pass	41	49

While the number of non-low SES male students passing language in the post-intervention group is slightly higher by 8 students, results were not statistically significant, $X^2(1, N = 144) = .168$, $p > .05$. Since the Chi-Square for the non-low SES male group did not reveal a significant difference for language, the Comparison of Column Proportions was not significant either.

Table 23

Pearson Chi-Square Test for Non-low SES Males Language

Pearson Chi-Square Tests		
		Intervention
Language	Chi-square	1.896
	df	1
	Sig.	.168

Note. Results are based on nonempty rows and columns in each innermost subtable.

Table 24

Non-low SES Males Social Studies

Non-low SES Male Social Studies			
		Intervention	
		Pre-Intervention	Post-Intervention
		Count	Count
Soc. St.	Fail	18	17
	Pass	54	55

Since the number of non-low SES male students passing social studies in the post-intervention group is practically the same as the pre-intervention group, results were not statistically significant, $X^2(1, N = 144) = .846$, $p > .05$. Since the Chi-Square for the non-low SES male group did not reveal a significant difference for social studies, the Comparison of Column Proportions was not significant either.

Table 25

Pearson Chi-Square Test for Non-low SES Males Social Studies

Pearson Chi-Square Tests		
		Intervention
Soc. St.	Chi-square	.038
	df	1
	Sig.	.846

Note. Results are based on nonempty rows and columns in each innermost subtable.

Table 26

Low SES Males Reading (Free and Reduced Lunch)

Low SES Male Reading			
		Intervention	
		Pre-Intervention	Post-Intervention
		Count	Count
Reading	Fail	14	13
	Pass	10	17

Table 27

Pearson Chi-Square Test for Low SES Males Reading

Pearson Chi-Square Tests		
		Intervention
Reading	Chi-square	1.200
	df	1
	Sig.	.273

Note. Results are based on nonempty rows and columns in each innermost subtable.

The number of low SES male students passing reading in the post-intervention group is not statistically significant, $X^2(1, N = 54) = .273$, $p > .05$. Since the Chi-Square for the low SES male group did not reveal a significant difference for reading, the Comparison of Column Proportions was not significant either.

Table 28

Low SES Males Language

Low SES Males Language			
		Intervention	
		Pre-Intervention	Post-Intervention
		Count	Count
Language	Fail	17	10
	Pass	7	20

Table 29

Pearson Chi-Square Test for Low SES Males Language

Pearson Chi-Square Tests		
		Intervention
Language	Chi-square	7.500
	df	1
	Sig.	.006*

Note. Results are based on nonempty rows and columns in each innermost subtable.
*. The Chi-square statistic is significant at the 0.05 level.

The number of low SES male students passing language in the post-intervention group is significantly higher than the low SES male students passing language in the pre-intervention group, $X^2(1, N = 54) = .006$, $p < .05$. The Chi-Square for the non-low SES male group revealed a significant difference. The Comparison of Column Proportions was also statistically significant.

Table 30

Comparison of Column Proportions for Low SES Males Language

Comparisons of Column Proportions[a]			
		Intervention	
		Pre-Intervention	Post-Intervention
		(A)	(B)
Language	Fail	B	
	Pass		A

Note. Results are based on two-sided tests with significance level 0.05. For each significant pair, the key of the category with the smaller column proportion appears under the category with the larger column proportion.
[a.] Tests are adjusted for all pairwise comparisons within a row of each innermost subtable using the Bonferroni correction.

The proportion who fail in the post-intervention group is smaller than the proportion who fail in the pre-intervention group. The proportion who pass in the pre-intervention group is smaller than the proportion who pass in the post-intervention group.

Table 31

Low SES Males Social Studies

Low SES Males Social Studies			
		Intervention	
		Pre-Intervention	Post-Intervention
		Count	Count
Soc. St.	Fail	10	7
	Pass	14	23

Table 32

Pearson Chi-Square Test for Low SES Male Social Studies

Pearson Chi-Square Tests		
		Intervention
Soc. St.	Chi-square	2.078
	df	1
	Sig.	.149

Note. Results are based on nonempty rows and columns in each innermost subtable.

While the number of low SES male students passing social studies in the post-intervention group is slightly higher, results were not statistically significant, $X^2(1, N = 54) = .149$, $p > .05$. Since the Chi-Square for the non-low SES male group did not reveal a significant difference for social studies, the Comparison of Column Proportions was not significant either.

Table 33

Females Only Reading

Female Only Reading			
		Intervention	
		Pre-Intervention	Post-Intervention
		Count	Count
Reading	Fail	19	8
	Pass	65	81

Table 34

Pearson Chi-Square Test for Females Only Reading

Pearson Chi-Square Tests		
		Intervention
Reading	Chi-square	6.095
	df	1
	Sig.	.014*

Note. Results are based on nonempty rows and columns in each innermost subtable.
*. The Chi-square statistic is significant at the 0.05 level.

The number of female only students passing reading in the post-intervention group is significantly higher than those in the pre-intervention group, $X^2(1, N = 173) = .014$, $p < .05$. The Chi-Square for the female reading group did reveal a significant difference for reading, and the Comparison of Column Proportions was also significant.

Table 35

Comparison of Column Proportions for Females Only Reading

Comparisons of Column Proportions[a]			
		Intervention	
		Pre-Intervention	Post-Intervention
		(A)	(B)
Reading	Fail	B	
	Pass		A

Note. Results are based on two-sided tests with significance level 0.05. For each significant pair, the key of the category with the smaller column proportion appears under the category with the larger column proportion.
[a.] Tests are adjusted for all pairwise comparisons within a row of each innermost subtable using the Bonferroni correction.

The proportion who fail in the post-intervention group is smaller than the proportion who fail in the pre-intervention group. The proportion who pass in the pre-intervention group is smaller than the proportion who pass in the post-intervention group.

Table 36

Females Only Language

Females Only Language			
		Intervention	
		Pre-Intervention	Post-Intervention
		Count	Count
Language	Fail	28	10
	Pass	56	79

Table 37

Pearson Chi-Square Test for Females Only Language

Pearson Chi-Square Tests		
		Intervention
Language	Chi-square	12.311
	df	1
	Sig.	.000*

Note. Results are based on nonempty rows and columns in each innermost subtable.
*. The Chi-square statistic is significant at the 0.05 level.

The number of female only students passing language in the post-intervention group was also significantly higher than those in the pre-intervention group, $X^2(1, N = 173) = .000$, $p < .05$. The Chi-Square for the female reading group did reveal a significant difference for language, and the Comparison of Column Proportions was also significant.

Table 38

Comparison of Column Proportions for Females Only Language

Comparisons of Column Proportions[a]			
		Intervention	
		Pre-Intervention	Post-Intervention
		(A)	(B)
Language	Fail	B	
	Pass		A

Note. Results are based on two-sided tests with significance level 0.05. For each significant pair, the key of the category with the smaller column proportion appears under the category with the larger column proportion.
[a.] Tests are adjusted for all pairwise comparisons within a row of each innermost subtable using the Bonferroni correction.

The proportion who fail in the post-intervention group is smaller than the proportion who fail in the pre-intervention group. The proportion who pass in the pre-intervention group is smaller than the proportion who pass in the post-intervention group.

Table 39

Females Only Social Studies

Females Only Social Studies			
		Intervention	
		Pre-Intervention	Post-Intervention
		Count	Count
Soc. St.	Fail	34	18
	Pass	50	71

The number of female only students passing social studies in the post-intervention group was significantly higher than those in the pre-intervention group, $X^2(1, N = 173) = .004$, $p < .05$. The Chi-Square for the female social studies group did reveal a significant difference for social studies, and the Comparison of Column Proportions was also significant.

Table 40

Pearson Chi-Square Test for Females Only Social Studies

	Pearson Chi-Square Tests	
		Intervention
Soc. St.	Chi-square	8.430
	df	1
	Sig.	.004*

Note. Results are based on nonempty rows and columns in each innermost subtable.
*. The Chi-square statistic is significant at the 0.05 level.

Table 41

Comparison of Column Proportions for Females Only Social Studies

Comparisons of Column Proportions[a]			
		Intervention	
		Pre-Intervention	Post-Intervention
		(A)	(B)
Soc. St.	Fail	B	
	Pass		A

Note. Results are based on two-sided tests with significance level 0.05. For each significant pair, the key of the category with the smaller column proportion appears under the category with the larger column proportion.
[a.] Tests are adjusted for all pairwise comparisons within a row of each innermost subtable using the Bonferroni correction.

The proportion who fail in the post-intervention group is smaller than the proportion who fail in the pre-intervention group. The proportion who pass in the pre-intervention group is smaller than the proportion who pass in the post-intervention group.

Table 42

Non-low SES Females Reading

Custom Table			
		Intervention	
		Pre-Intervention	Post-Intervention
		Count	Count
Reading	Fail	10	2
	Pass	47	47

Table 43

Pearson Chi-Square Test for Non-low SES Females Reading

Pearson Chi-Square Tests		
		Intervention
Reading	Chi-square	4.757
	df	1
	Sig.	.029*

Note. Results are based on nonempty rows and columns in each innermost subtable.
*. The Chi-square statistic is significant at the 0.05 level.

While the number of non-low SES female students passing reading in the post-intervention group was the same as for those in the non-intervention group, the number of non-low SES female students failing from the post-intervention group was significantly lower than in the pre-intervention group, $X^2(1, N = 106) = .029$, $p < .05$. The Chi-Square for the non-low SES female reading group did reveal a significant difference for reading, and the Comparison of Column Proportions was also significant.

Table 44

Comparison of Column Proportions for Non-low SES Females Reading

Comparisons of Column Proportions[a]			
		Intervention	
		Pre-Intervention	Post-Intervention
		(A)	(B)
Reading	Fail	B	
	Pass		A

Note. Results are based on two-sided tests with significance level 0.05. For each significant pair, the key of the category with the smaller column proportion appears under the category with the larger column proportion.
[a.] Tests are adjusted for all pairwise comparisons within a row of each innermost subtable using the Bonferroni correction.

The proportion who fail in the post-intervention group is smaller than the proportion who fail in the pre-intervention group. The proportion who pass in the pre-intervention group is smaller than the proportion who pass in the post-intervention group.

Table 45

Non-low SES Females Language

Non-low SES Females Language			
		Intervention	
		Pre-Intervention	Post-Intervention
		Count	Count
Language	Fail	14	6
	Pass	43	43

Table 46

Pearson Chi-Square for Non-low SES Females Language

Pearson Chi-Square Tests		
		Intervention
Language	Chi-square	2.611
	df	1
	Sig.	.106

Note. Results are based on nonempty rows and columns in each innermost subtable.

The number of non-low female only students passing language in the post-intervention group was not significantly different from those in the pre-intervention group, $X^2(1, N = 106) = .106$, $p > .05$. The Chi-Square for the non-low SES female language group did not reveal a significant difference for the language subtest of the Alabama High School Graduation Exam (AHSGE), and the Comparison of Column Proportions was not significant either.

Table 47

Non-low SES Females Social Studies

Custom Table			
		Intervention	
		Pre-Intervention	Post-Intervention
		Count	Count
Soc. St.	Fail	24	12
	Pass	33	37

Table 48

Pearson Chi-Square for Non-low SES Females Social Studies

Pearson Chi-Square Tests		
		Intervention
Soc. St.	Chi-square	3.646
	df	1
	Sig.	.056

Note. Results are based on nonempty rows and columns in each innermost subtable.

The number of non-low female only students passing social studies in the post-intervention group was not significantly different from those in the pre-intervention group, $X^2(1, N = 106) = .056$, $p > .05$. The Chi-Square for the non-low SES female social studies group did not reveal a significant difference for the social studies subtest of the Alabama High School Graduation Exam (AHSGE), and the Comparison of Column Proportions was not significant either.

Table 49

Low SES Females Reading

Low SES Females Reading			
		Intervention	
		Pre-Intervention	Post-Intervention
		Count	Count
Reading	Fail	9	6
	Pass	18	34

Table 50

Pearson Chi-Square Test for Low SES Females Reading

Pearson Chi-Square Tests		
		Intervention
Reading	Chi-square	3.118
	df	1
	Sig.	.077

Note. Results are based on nonempty rows and columns in each innermost subtable.

The number of low SES female students passing reading in the post-intervention group was not significantly different from those in the pre-intervention group, $X^2(1, N = 67) = .077$, $p > .05$. The Chi-Square for the low SES female reading group did not reveal a significant difference for the reading subtest of the Alabama High School Graduation Exam (AHSGE). The Comparison of Column Proportions was not significant either.

Table 51

Low SES Females Language

Low SES Females Language			
		Intervention	
		Pre-Intervention	Post-Intervention
		Count	Count
Language	Fail	14	4
	Pass	13	36

Table 52

Pearson Chi-Square Test for Low SES Females Language

Pearson Chi-Square Tests		
		Intervention
Language	Chi-square	14.370
	df	1
	Sig.	.000*

Note. Results are based on nonempty rows and columns in each innermost subtable.
*. The Chi-square statistic is significant at the 0.05 level.

The number of low SES female students passing language in the post-intervention group was significantly different from those in the pre-intervention group, $X^2(1, N = 67) = .000$, $p < .05$. The Chi-Square for the low SES female language group did reveal a significant difference for the language subtest of the Alabama High School Graduation Exam (AHSGE); the Comparison of Column Proportions was also significant.

Table 53

Comparison of Column Proportions for Low SES Females Language

Comparisons of Column Proportions[a]			
		Intervention	
		Pre-Intervention	Post-Intervention
		(A)	(B)
Language	Fail	B	
	Pass		A

Note. Results are based on two-sided tests with significance level 0.05. For each significant pair, the key of the category with the smaller column proportion appears under the category with the larger column proportion.
[a.] Tests are adjusted for all pairwise comparisons within a row of each innermost subtable using the Bonferroni correction.

The proportion who fail in the post-intervention group is smaller than the proportion who fail in the pre-intervention group. The proportion who pass in the pre-intervention group is smaller than the proportion who pass in the post-intervention group.

Table 54

Low SES Female Social Studies

Custom Table			
		Intervention	
		Pre-Intervention	Post-Intervention
		Count	Count
Soc. St.	Fail	10	6
	Pass	17	34

Table 55

Pearson Chi-Square Test for Low SES Female Social Studies

Pearson Chi-Square Tests		
		Intervention
Soc. St.	Chi-square	4.306
	df	1
	Sig.	.038*

Note. Results are based on nonempty rows and columns in each innermost subtable.
*. The Chi-square statistic is significant at the 0.05 level.

The number of low SES female students passing social studies in the post-intervention group was significantly different from those in the pre-intervention group, $X^2(1, N = 67) = .038$, $p < .05$. The Chi-Square for the low SES female social studies group did reveal a significant difference for the social studies subtest of the Alabama High School Graduation Exam (AHSGE), and the Comparison of Column Proportions was also significant.

Table 56

Comparison of Column Proportions for Low SES Females Social Studies

Comparisons of Column Proportions[a]			
		Intervention	
		Pre-Intervention	Post-Intervention
		(A)	(B)
Soc. St.	Fail	B	
	Pass		A

Note. Results are based on two-sided tests with significance level 0.05. For each significant pair, the key of the category with the smaller column proportion appears under the category with the larger column proportion.
[a.] Tests are adjusted for all pairwise comparisons within a row of each innermost subtable using the Bonferroni correction.

The proportion who fail in the post-intervention group is smaller than the proportion who fail in the pre-intervention group. The proportion who pass in the pre-intervention group is smaller than the proportion who pass in the post-intervention group.

Descriptive Statistics for Research Questions 1, 2, and 3

While several of the sub-groups for the disaggregated data reveal statistically significant differences between the post-intervention and the pre-intervention sub-groups, additional descriptive statistics exist to support these statistical findings and to address Research Questions 1 and 2 regarding the Alabama High School Graduation Exam and Alabama Direct Assessment of Writing. These descriptive statistics include comparisons between other schools within the system that are not employing the academy intervention structure. These are collective data sets pulled from State Department Accountability reports. Data points include percentages exceeding standards in reading, graduation rates, discipline referrals, Alabama High School Graduation Exam results, and Alabama Direct Assessment of Writing results. These descriptive statistics should serve to further strengthen the qualitative results to be outlined for Research Question 3.

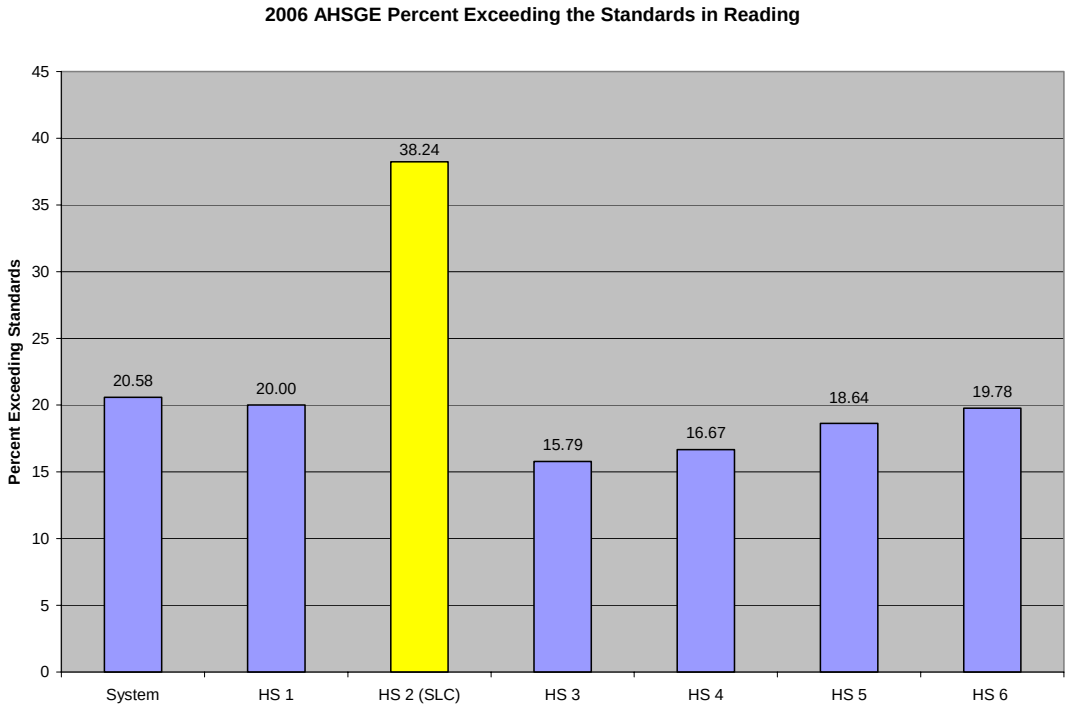

Figure 2. Comparison of academy students exceeding state standards in reading.

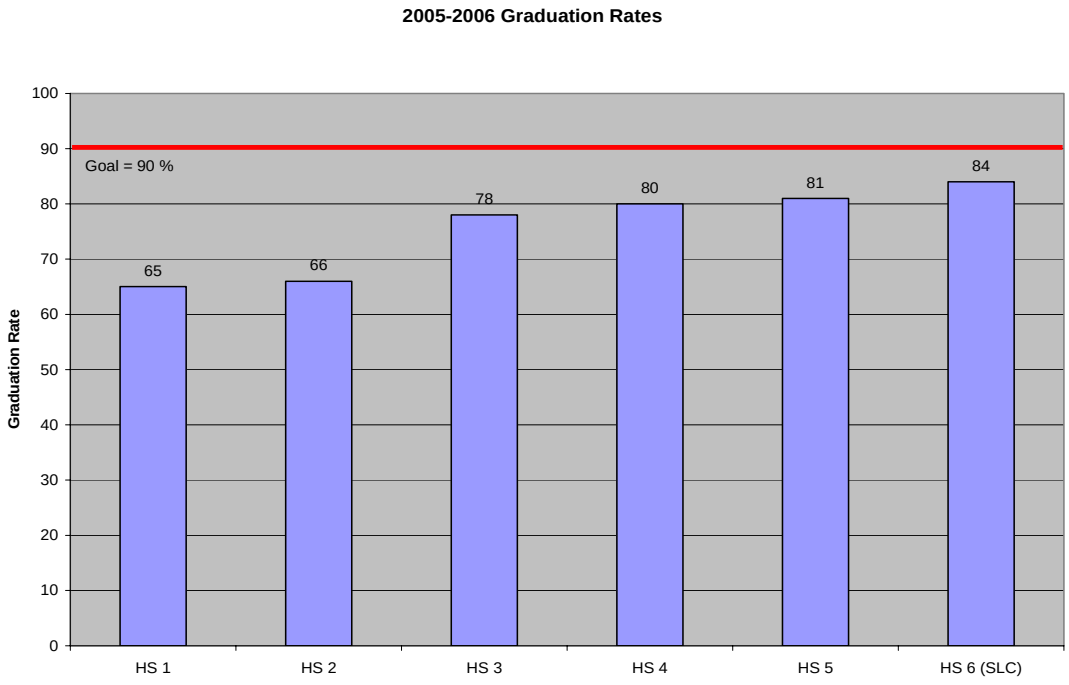

Figure 3. Graduation rate comparisons for academy group (note SLC is now at 89%).

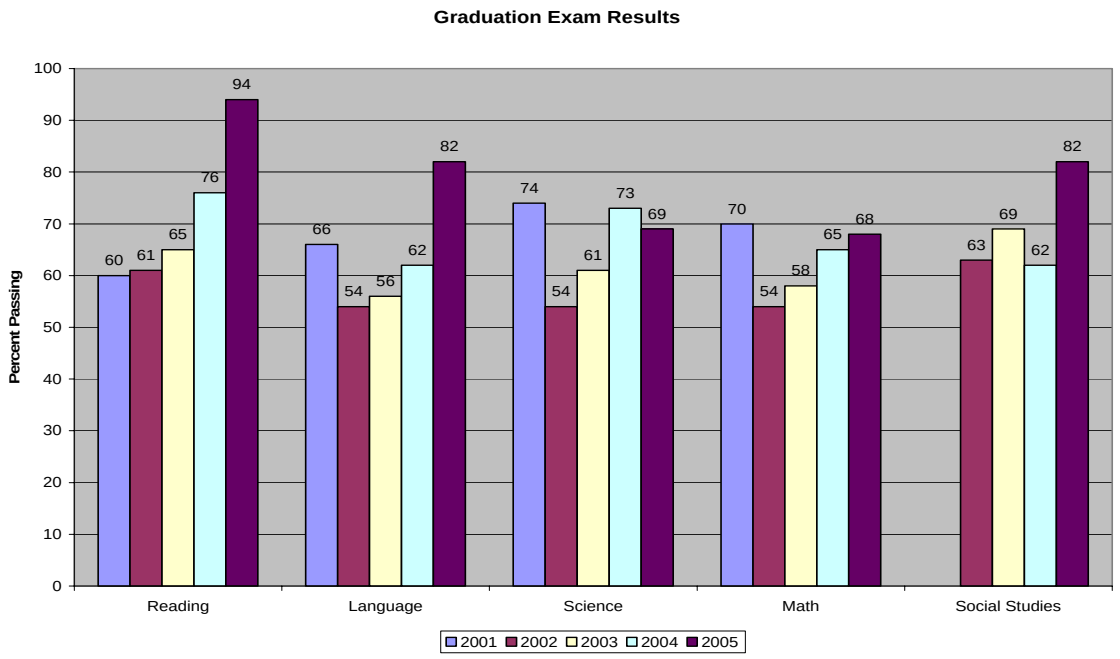

Figure 4. AHSGE results before academy intervention and first-year of academies.

The 2005 data reflect gains experienced by the original post-intervention academy group. Students were grouped into academies for reading and language and social studies but not for science and math courses. Students were later grouped for science but not for math.

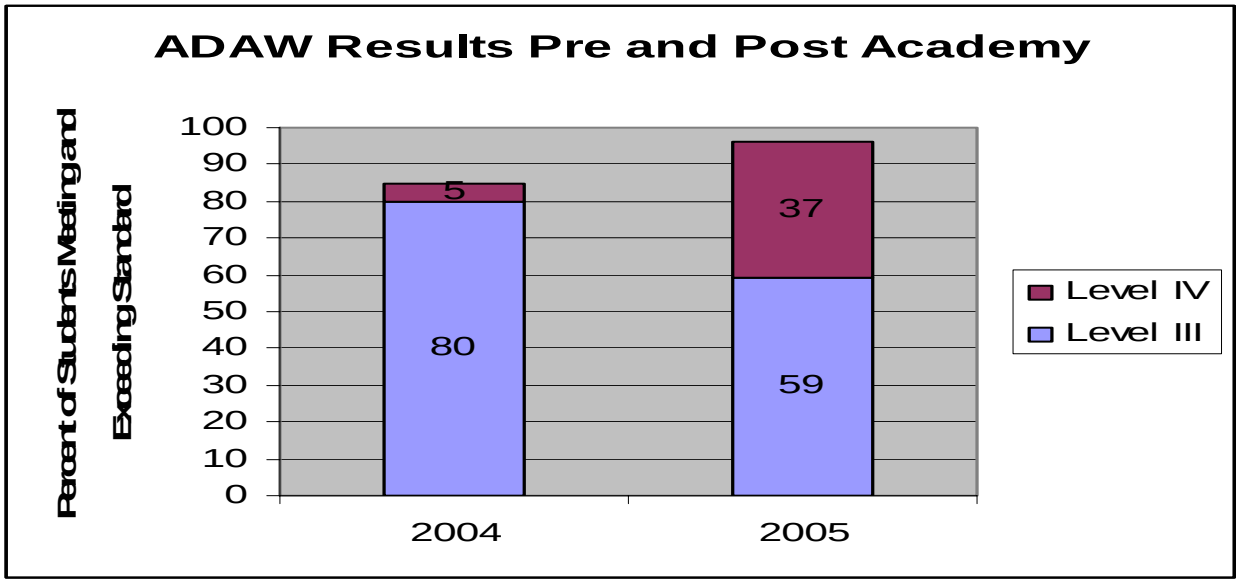

Figure 5. Alabama Direct Assessment of Writing results pre- and post-intervention.

It is important to note that the overall percentage of students scoring a Level III or IV on the Alabama Direct Assessment of Writing did increase from 85% to 96%, but it is even more important to point out that the number of students exceeding the standard grew from 5% to 37%. These results, along with the system-wide comparisons seen in Figure 4, speak to Research Question 2 about the connection of the academy structure and improvements on the Alabama Direct Assessment of Writing. While the results cannot be directly correlated to the academy structure, descriptive evidence does exist to at least support a connection between this structure and increased writing success. These results will be further addressed in chapter V.

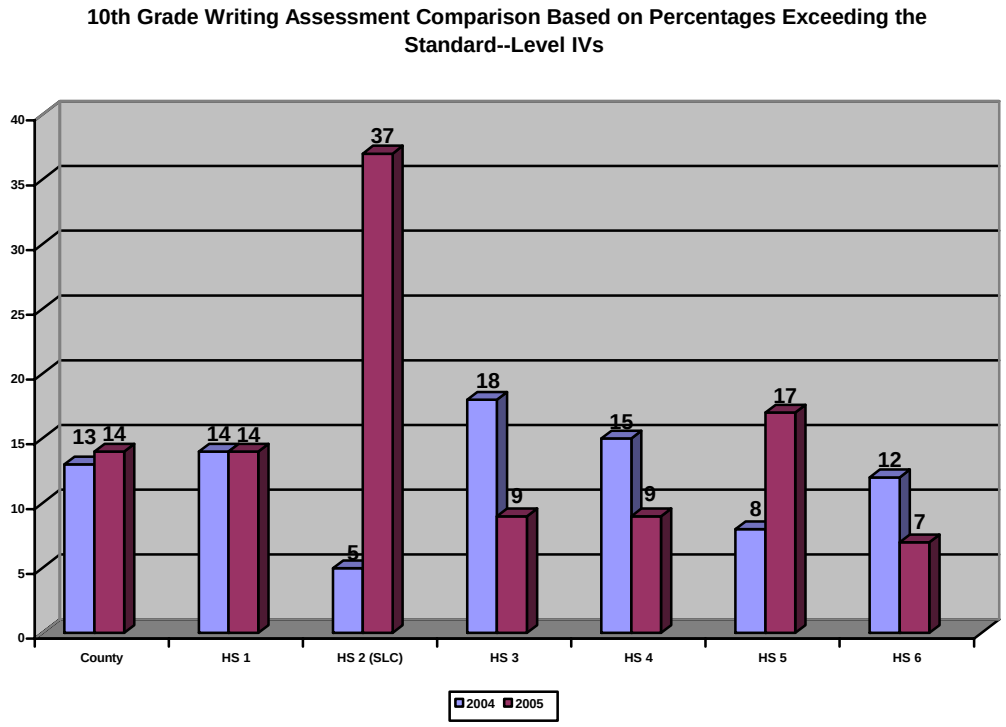

Figure 6. 10th grade writing assessment gains post-academy intervention.

Special Populations

Even though the numbers of special education and limited English proficiency students were too limited to run reliable statistical tests, the descriptive results from these students in the group prior to academy implementation and the first group after the implementation are very promising:

Table 57

AHSGE Passing Results for Special Populations

	Pre-Intervention Group	First Post-Intervention Group
Reading	0	3
Language	0	3
Social Studies	1	4

n for pre-intervention = 4; *n* for first post-intervention group = 8

Table 58

Discipline Referrals

	Pre-Intervention Group	First Post-Intervention Group
Total Incidences	187	132

The numbers in Table 58 represent the count of school incidents recorded through the School Incident Report (SIR) data for the year prior to academy intervention and the first year of the intervention. Incidences include harassment, tobacco use and possession, profanity, fighting, disorderly conduct, disobedience, defiance of authority, alcohol use and possession, truancy, knife possession, and sexual offenses. Again, while this data cannot be inclusive or considered statistically significant, it does add to the other types of data, which support an overall improvement after academy implementation. At the same time, this data reinforces teacher perceptions about changes in student motivation and behavior to be discussed later.

Summary of Quantitative Results

These quantitative and descriptive data results will be interpreted and connected to the relevant literature in the subsequent chapter. At this point, however, it is important to summarize that the findings for Research Questions 1 and 2 support the rejection of the null hypothesis that

there is not a significant difference in achievement for traditional standard/advanced scheduled students and those scheduled into heterogeneous academies as measured by the Alabama High School Graduation Exam and the Alabama Direct Assessment of Writing.

The following qualitative section will address the changes in teacher beliefs, perceptions, and practices as reported through three weeks of reflective blog posts and follow-up discussions focused by the Teacher Survey Instrument (see Appendix B).

Qualitative Data

The following qualitative data sets were gathered using questions from the above mentioned survey instrument; however, instead of using a traditional survey method, the one former and four current academy teachers engaged in a 3-week reflective discussion with each other and the researcher through the use of a reflective blog (Anjewierden & Efimova, 2006). Five questions from the Teacher Survey Instrument were posted each week over a 3-week period in order to encourage a deeper level of reflection and to allow for better technological support from the researcher. The research consent form is located in Appendix C. The IRB approval letter is in Appendix D. The transcripts from the reflective blog postings can be located in Appendix E. A follow-up discussion was also held and recorded in order to clarify emerging themes and patterns (Appendix F). Table 59 represents the key characteristics of the five teachers involved in the qualitative data collection process.

Table 59

Qualitative Data Teacher Respondent Characteristics (Survey Questions 1-3)

Respondent	Years Teaching Standard/Advanced Classes	Years Teaching in the Academy Structure	Total Year Teaching Experience
Teacher 1	6	5	11
Teacher 2	11	4	11
Teacher 3*	5	1	5
Teacher 4	18	2	18
Teacher 5	6	2	6

Note: Teacher 3 has the fewest years teaching part of the day in the academy structure and is the furthest removed from the process--only participated in the first year.

While section one (Questions 1-3) of the survey instrument was designed to illicit basic demographic information from the respondents, section two focused on more global philosophies concerning the overall goals of education and the role of individual educators in fulfilling that goal. These questions were designed to help establish some basic philosophies of education in terms of equity issues in order to look for subsequent patterns and themes involving issues of equity upon specifically discussing the mixed-ability academy structure.

For question 4 of the survey, teachers were asked to respond to the following prompt: *In your opinion, what is the ultimate goal of education?* The following themes were recorded: preparing students for college, evaluating ideas, acquiring knowledge, making informed decisions, gaining skills, learning to function in society, being successful, and earning a living. Of the recorded themes, the ones referred to the most by the five teachers were making decisions (4 references); evaluating ideas (5 references); and, the most cited, learning to live successfully within the larger society (9 references). Teacher 1 sums up these responses: “Ultimately, our goal is to produce fully informed, well-rounded, successfully functioning, members of society.”

Question 5 of the survey asked teachers to discuss the role that educators play in building a strong community and society. Again, this question served the purpose of building the case of equity issues involving different types of student grouping. The majority of responses for this question centered upon the teacher's job to "provide a positive role model" (T3, T4, T5), work "to produce well-educated, critically-thinking, active members of the workforce and community" (T1), and "how to evaluate information and make informed decisions" (T2).

Questions 6 through 13 of the survey instrument drove directly to the heart of the grouping issue and revealed several key patterns of thinking in terms of teacher beliefs about student grouping. Question 6 began with asking what teachers felt were the advantages of traditional standard/advanced student grouping structures. The clear pattern emerging from this question was the idea of pacing (9 references; T1, T2, T3, T4, T5). As a group, the teachers felt that it is easier to move at the appropriate pace for students when they are divided into "regular/standard" groups and "advanced/honors" groups. Teachers spoke of moving at a more appropriate rate for the different groups of students and being able to "cover" more material with advanced groups. Teacher 2, who has 4 years experience with the academy structure, said: "The advantage to standard and advanced classes is the ability to move at a faster pace and push students in both classes at a pace that is more comfortable for each group." Other emerging ideas included college preparation (3 references), foreign language for advanced students (2 references), and creating more independent "advanced" learners (4 references).

When asked about the disadvantages of the traditional standard/advanced groupings, the teachers began addressing the issues of equity discussed in the research on grouping. Almost all of the references addressed the disparities between the access to quality education (3 references), social and educational disadvantages (6 references), more negative school culture (3 references),

and an “us against them” student dynamic (5 references). Teacher 3 captured the essence of these themes in the following statement: “The main disadvantage of standard and advanced class separation is that students in both levels do not continue to foster tolerance, understanding, and compassion for those students who can’t perform at the same levels.” Other respondents addressed the issue of “labeling” students and the harm that this seemed to cause in terms of motivation and achievement (T1, T2, T3, T5).

From all questions being coded, the one that presented the most reference nodes was the question concerning the advantages of mixed-ability academy groups. Teachers cited better inclusion, equity, higher expectations for all students, higher order thinking for all students, less stress for “advanced/honors” students, more time to cover all standards, more unified instruction, more creative teaching in order to differentiate, new ideas, positive peer pressure, and more standards mastery for the majority of students. Positive peer pressure was the most cited reference among the teachers (8 instances). The following examples from Teacher 1 and Teacher 2 demonstrate the types of reflection prompted by the “advantages” of mixed-ability groups question:

> Teacher 1
>
> The main advantage of the mixed-ability academies is that all students operate with the same high standards. Standard students are partnered with advanced students who expose them to new ideas, higher order thinking processes, and the expectation of success. Standard students feel more positive peer pressure to achieve in the academies. It also brings about a more unified attitude within the class. Another advantage is that in the mixed ability academies, the Special Education students are divided equally among each class instead of all being placed in one class. This gives me more time to work individually with these students instead of being overwhelmed by all the needs of one class.
>
> Teacher 2
>
> I believe the advantage of mixed-ability classes is the feeling of equity. Everyone feels they are held to a higher standard. The standard students seem to work harder and the

> division between standard and advanced seems to dissolve. Advanced students are given opportunities to help standard students and feel a sense of accomplishment without feeling superior. Standard students feel a sense of acceptance and achievement by being successful in the same class as students who were formerly considered advanced.

While teachers cited many advantages for the mixed-ability grouping, they did also cite a few disadvantages for follow-up Question 9. Even though there were only four main pattern nodes, the difficulty of differentiation and the very strong perceptions of students and parents were cited. Teacher 1 summed up the sentiment in this area: "Parents often object to placing their child with 'standard' students." Teacher 3 went on to say that this may actually happen on both sides: "Parents of advanced students may feel their child is not challenged; parents of standard students may worry their child will fall behind." However, when asked which structure the teachers feel is best for students, the five teachers unanimously agreed that the mixed-ability structure best serves the needs of all students.

Questions 11, 12, and 13 specifically asked teachers to reflect upon how they felt that grouping affected student motivation, behavior, and achievement, respectively. Again, all teachers agreed that the mixed-ability setting tends to motivate the majority of students the best, although some teachers cited under a previous question that "advanced/honors" students often lack motivation to excel when mixed with lower performing students (T 4). In the follow-up discussion, Teacher 2 stated,

> I think motivation is easier because kids--especially for your lower achieving--they don't want to look "dumb" or "standard," and I think that part kind of takes care of itself when they are grouped correctly. I think that um . . . also I think that it helps with just the climate.

In the same vein, teachers also agreed that the mixed-ability academy structure decreased discipline problems: "behavior is better [in mixed-ability academies] than in Standard/Advanced groups because the students are sometimes around a new set of people and want to put the best

foot forward" (T 2). These perceptions are supported by Table 58 showing a reduction in discipline occurrences by 55 in the first year of implementation. In terms of achievement, all teachers except Teacher 5 felt strongly that the mixed-ability structure improved student achievement. While Teacher 5 did cite increased achievement for "standard students," an additional comment was made: "The advanced students tend to become complacent and satisfied with a 'standard' level of achievement."

Question 14 of the survey directly addressed Research Question 3: Does teaching in a mixed-ability structure change teacher perceptions, beliefs, and practices? This question was also addressed in a follow-up face-to-face meeting and yielded insightful data. As possibly expected, the teacher citing the least amount of change in personal perceptions, beliefs, and practices was Teacher 3, who had only worked in the academy structure for the first year of its implementation before moving to another school within the system. This teacher, however, cited that the experience caused an increase in "modeling" practices and an increased use of examples for all students. Teacher 2 stated that the perception "about what 'standard' students were capable of increased dramatically." Teacher 2 also said, "I began to explore new methods of instruction; I began to grow as a teacher." Teacher 1 directly addressed the changes in instructional practices by stating that lessons had to be more "visual, active, and interactive"; "more time planning and implementing lessons" was required. Teacher 4 stated, "I have seen a trend in where I as a teacher have tried to hold standard students to higher expectations." Teacher 5 echoed many of the sentiments of colleagues by stating that the academy structure increased "creativity," but this teacher did still have some reservations about the "long-term results of students' success."

In the final question, teachers were asked to reflect upon any other considerations for implementing a mixed-ability structure. Several patterns emerged: friendship, collaboration, and

communication (7 references), lowering dropout rates, and parental involvement/communication. Repeatedly, the teachers referred to how close they had grown as a result of the academy "team" structure and how it would not be possible for teachers to work effectively within the structure without liking each other. All teachers felt that it increased their levels of collaboration and collegiality. Other ideas emerging included making sure that parents and students understand the expectations that will be placed on them as part of a mixed-ability academy structure. The pattern of statements from this question tended to reflect the previous concern over parental perceptions regarding student group placement.

Face-to-Face Follow-up Focus Meeting

After organizing and coding the original responses from the three weeks of reflective blog postings, a final face-to-face focus group meeting was scheduled to discuss the teachers' experiences while reflecting upon the mixed-ability academy intervention. Three final questions were outlined for follow-up: What types of training did they receive to help them be successful in the mixed-ability academy, and what types of training would they recommend for others embarking on this intervention? Had their attitudes about student grouping changed in any way, and if so how? What other strategies did they employ along with the re-grouping of students that might have had a positive impact on student achievement? This focus meeting was digitally video-recorded and transcribed for further analysis (Appendix F).

The following table briefly outlines the responses to the first part of the follow-up interview which targets professional development. Teachers were asked to reflect upon types of professional development that they felt helped them be more effective in a mixed-ability

classroom. Training in Advanced Placement strategies, differentiation, and Marzano (2003) Essential Nine instructional strategies are the most strongly represented.

Table 60

Collective Professional Development of Academy Teachers

Respondent	Professional Development Which Aided in Academy Success
Teacher 1	Bureau of Educational Research (BER) Training in Social Studies, Pre-Advanced Placement Summer Institute, History Alive Hands-on, Marzano (2003)
Teacher 2	BER Workshop on Differentiated Instruction, Advanced Placement Training, Marzano (2003) *Classroom Instruction that Works* Book Study , Science Academy with State Secondary Teacher of the Year, Inquiry-based Instruction
Teacher 3	Workshop on Differentiated Instruction at the Regional In-service Center, Gulf Coast on the Teaching of Writing, Marzano (2003), LEA Workshop on Layered Curriculum
Teacher 4	Advanced Placement Vertical Team Training, Summer Science Academy with State Teacher of the Year, Science in Motion
Teacher 5	Advanced Placement Summer Institute, Marzano (2003)

While not all teachers reported extreme changes in their instructional practices, most did agree that professional development is very important to helping teachers take on the challenges of mixed-ability instruction. Again, Teacher 2 reiterated the importance of this additional training:

> I think it would be beneficial to have more training. If you were going to do this, I think it would be beneficial to the teachers. Just because the more ideas I had the better I got at it; like the more resources I had, the better I got.

After addressing the training and resources that helped in the implementation of the mixed-ability academies, the teachers did address how their ideas about grouping have changed

over the course of their experience teaching in the academy structure. Follow-up comments reinforced the originally collected, organized, and coded responses about attitudes. Additional comments did address how the teachers also felt that the academy intervention had changed the students. Teacher 1 commented that even though students have only been scheduled into academy classes for three of the seven periods in a day, many want to remain in the structure after their sophomore year and not go back to strictly separated standard and advanced classes as juniors. Again, teachers addressed students "living up to their label" (T2). Teacher 5 commented that the academy structure lets students excel where they are truly talented and does not expect them to excel in all academic areas. The final--and possibly most emotionally felt response--coming from the discussion was the belief that in order for the academies to work successfully, student grouping must be carefully orchestrated with the proper level of teacher input. The teachers interviewed felt that in recent years, student grouping has been affected by teacher, counselor, administrator, and parental preferences and true mixed-ability academies have not been created. They cited decreased achievement, motivation, and behavior as evidence that the current academies after ninth grade implementation have not retained the grouping rigor carried out in the first years of the process where students were hand ranked and assigned to groups evenly. Respondents felt that the academies were falling victim to many of the cultural and political issues that often make true mixed-ability grouping difficult at the secondary level (Oakes & Saunders, 2008). To illustrate this point, all of the teachers nodded and began to talk excitedly when Teacher 2 made the following statement:

> I would like to say that how you group the kids matters. I think our groups are not right this year, and I don't think we have them mixed evenly, and the difference from last year and this year is night and day. I have one class that is seventeen advanced and a few standard and one that is all standard and six advanced, and it is night and day.

While the original research plans were to include the school administrators throughout the entire reflective process, allowing them to bypass these discussions did foster a more open forum for teachers to discuss issues that they felt were germane to the success of future academies. Teachers often returned to this idea that in order for the academies to work, they must be evenly grouped based on actual student performance.

The following table summarizes the teacher responses in terms of their perceived changes in beliefs, perceptions, and practices as a result of working in the academy structure.

Table 61

Teacher Noted Changes in Beliefs, Perceptions, and Practices

Respondent	Beliefs	Perceptions	Practices
Teacher 1	*0	*0	+
Teacher 2	+	+	+
Teacher 3	**0	**0	+
Teacher 4	+	+	***0
Teacher 5	0	+	+

Scale: Negative Change (-), No Change (O), Positive Change (+)
Notes: *Teacher 1 stated no change because the academy structure better met previously held beliefs about student grouping. **Teacher 3 only taught one year in the academy structure. **Newest addition to the academy team and most isolated in terms of physical proximity.

Table 61 provides a snapshot of how the teachers perceive that they may have changed as a result of their experiences with the mixed-ability academies. It is interesting to note that the teachers were sometimes reluctant to admit changes in beliefs and perceptions in their reflective postings and follow-up discussions. Teacher 1 and Teacher 3 both stated that their beliefs and perceptions “did not change much” but then went on to describe several changes. Teachers did not report any outwardly negative changes in beliefs and perceptions about heterogeneous

grouping other than with regard to social and cultural issues of equity. The results reported here focus on changes in beliefs, perceptions, and practices as they relate to mixed-ability grouping.

Summary

Quantitative Chi-Square data have been cited to address Research Question 1 regarding the effect of mixed-ability grouping on student achievement on three portions of the Alabama High School Graduation Exam. Research Question 2 was addressed using the descriptive data for the Alabama Direct Assessment of Writing. Research Question 3 was addressed using qualitative data from a reflective teacher blog with a follow-up focus group discussion. Data for all three questions will be interpreted and discussed with recommendations in the following chapter.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

As discussed in chapter III, Victoria Bernhardt (1998) illustrates why schools should use multiple measures of data for school improvement efforts. Much of the evaluation of both the academy intervention and the overall approach to this research project has been based on these multiple measures of data. Schools striving for continuous improvement must look beyond the most obvious data results and "dig deeper" in order to truly evaluate improvement efforts and their outcomes. Bernhardt addresses demographics, perceptions, student learning, and school processes. For the mixed-ability academy approach to school improvement, it is important to examine all of these sources of data before making any decisions about the effectiveness of the intervention. While schools may be judged for accountability purposes primarily on student learning data, in order to examine the overall effectiveness of a reform intervention such as high school restructuring, it is crucial to look at all possible sources of data in order to draw a more trustworthy conclusion with regards to whether or not the intervention is best serving the needs of the students in question. During the following discussion of each research question, the Bernhardt model will provide opportunities for exploring interactions in these data sets and help organize any possible cross-references that may be worth noting and discussing. Therefore, the summary, conclusions, and recommendations for this mixed-ability academy structure research find their framework within Bernhardt's multiple measures of data model.

Discussion of Research Question 1

Is there a correlation between student grouping (academic/vocational tracked or mixed-ability detracked) and passing rates on the language, reading, and social studies portions of the Alabama High School Pre-Graduation Exam (AHSGE)?

Based on the Chi-Square analysis results for Research Question 1 presented in the previous chapter, several statistically significant results emerged that favor the rejection of the null hypothesis for many of the subgroups analyzed: H_{01}: There is no statistically significant difference in student passing rates on the Alabama High School Graduation Exam for students scheduled into mixed-ability academies.

Overall, the academy post-intervention group outscored the pre-intervention group on all three subtests examined: reading, language, and social studies. For males only, the post-intervention group scored significantly better than the pre-intervention group on language only. For low SES males, the post-intervention group scored significantly better than the pre-intervention group on language only. For non-low SES males, no significant difference was found between the two groups.

For females only, the post-intervention group statistically outscored the pre-intervention group on reading, language, and social studies. For low SES females, the post-intervention group scored statistically better than the pre-intervention group on language and social studies, and, finally, for non-low SES females, the post-intervention group scored significantly better on reading only.

With this in mind, it is possible to reject the null hypothesis for the entire group of males and females, and then individual decisions must be made regarding the different disaggregated subgroups. The results as a whole are supported by the research outlined in chapter II regarding

the positive effects for mixed-ability grouping (Holloway, 2001; Smith-Maddox & Wheelock, 1995; Wheelock, 1992, 1993, 1995). Given that tracking appears to have the greatest detrimental effect on minority and disenfranchised populations (Braddock & Slavin, 1992; Oakes, 1985, 1993, 2005), the results are less than surprising that females and low SES groups tend to benefit the most from "de-tracking." The fact that these groups faired better in the mixed-ability academies is encouraging, especially considering that statistically significant results were seen for all three subtests: reading, language, and social studies among differing subgroups. It is also encouraging to examine the descriptive statistics for the special education students from the group prior to the academy intervention and the group after implementation. Again, numbers were too small for statistical analysis, but the fact that more special education students passed portions of the graduation exam in the academy structure than in the previous standard/advanced structure is also promising for practitioners. The following table provide a concise summary of the statistical results reported through the Chi-square analysis.

Table 62

Summary of Chi-Square Results for all Subgroups

Group	Reading	Language	Social Studies
All Students	X (.026)	X (.000)	X (.008)
Males Only		X (.012)	
Low SES Males		X (.006)	
Non-Low SES Males			
Females Only	X (.014)	X (.000)	(.004)
Low SES Females		X (.000)	(.038)
Non-Low SES Females	X (.029)		

Note: X indicates that the post-intervention subgroup scored significantly better than its pre-intervention counterpart; *p* values are reported for areas of significance. Blank cells indicate no significant differences between the pre-intervention and the post-intervention group.

While these results address the “student learning” measure of data, additional information can be garnered from examining the other data sources available for demographics, perceptions, and school processes. Demographic data for this study also supports the interpretation that the academy structure does, indeed, support increased achievement. Upon analysis of demographic data sources such as discipline referrals, gender, grade level, and graduation rate for the academy groups, additional evidence emerges to support the conclusion that the academy structure, while not particularly causing the increase in achievement does, in fact, have an overall effect on student achievement. As could be seen from reviewing the graduation rates presented in Figure 3 from chapter III, the school with the academy structure was the leader in the school system for increasing graduation rates. As more students succeeded in the academy structure, fewer dropped out, and more felt supported and prepared to successfully complete graduation requirements (Balfanz, et al., 2009; Cone, 2006; Danzi, Reul, & Smith, 2008).

Bernhardt’s (1998) “school processes” data is especially significant for this study because it directly addresses a restructuring of the master schedule in order to create small learning communities for increased student success. The academy process itself has been evaluated over several years and continues to be monitored and evaluated for areas of improvement. Teacher perceptions from the qualitative data presented in chapter IV also address areas of strengths as well as areas for additional improvement that will be addressed under Research Question 3.

Discussion of Research Question 2

Is there a connection between student grouping (academic/vocational tracked or mixed-ability detracked) and student levels of writing attainment as measured by holistic scores on the Alabama Direct Assessment of Writing (ADAW)?

The initial research plan was to attempt to answer Research Question 2 through statistical analysis. Unfortunately, after compiling data for student results on the Alabama Direct Assessment of Writing, it was decided with the help of other experienced researchers that since the Alabama Direct Assessment of Writing was only administered to one of the pre-intervention groups that this would create too much of a disparity in group size, thus resulting in unreliable results. Still, this question can be addressed through the descriptive analysis presented in chapter IV. As can be seen in these charts, the first group of students in the academy structure scored much higher on the 10th grade writing assessment than their peers in the non-academy structure the previous year.

As is pointed out through the charts, not only did the overall percentage of students scoring at the proficient level increase from 85% to 96%, but the percentage of students "exceeding" the standard and scoring at Level IV jumped from 5% to 37%. This increase was not seen at any other school within the system until the lessons learned from the academy intervention were recorded and shared with colleagues from other schools. Scherff and Piazza (2005) addressed the varied writing experiences of students under a cloud of state writing assessments and interestingly noted that these experiences are not always equitably divided among students because of "tracking" issues such as regular classes and advanced/honors/ Advanced Placement classes.

One of the advantages to having larger percentages of students "exceeding" the state-set proficiency standard is that these students may be better prepared to meet the challenging writing demands that they will face after high school and as members of the workforce. Students who score a Level IV often begin to view themselves as more able writers and sometimes begin to enjoy writing more as a result since we often do what we feel that we are good at doing. It is the

struggling writers, those who score Level 0, Level I, and even Level II, who tend to become even more reluctant writers. In turn, they have even more difficulty moving beyond this very basic level of preparation as writers.

Is important to note, however, that the descriptive data used here to address Research Question 2 is strictly based on the "holistic" writing score. While many students are able to write a narrative and tell a good story, they may not be able to successfully complete a persuasive essay or write in expository mode. At the same time, this data does not help us further interpret the interaction between the other types of writing assessment sub-scores: writing mechanics, sentence formation, and grammar and usage. Students who perform well on the holistic scale often struggle with these three additional measures of writing proficiency.

If the original research question had been to look at the sub-test scores, then it would have been even further possible to triangulate these results with the language portion of the Alabama High School Graduation Exam, and this may have served to find additional interactions between the multiple measures of data available for drawing further conclusions based on the data at hand.

One advantage that has developed at Academy High is the tradition of being a school with good writing instruction and good writing test scores. Students have won local, district, and state-level writing competitions, and teachers are aware of the importance of writing for future academic success. Of the five teachers interviewed, three specifically mentioned the writing assessment as a way of measuring student achievement. Teacher 1 even stated that students demonstrated "marked improvement" after the post-academy intervention.

As a result of these and other factors, such as school-wide celebrations of achievements in writing, Academy High has used demographic, perceptual, student learning, and school

process data to address a very specific goal of improving student writing within the school. This initiative has even moved beyond the academy teachers into the upper grade levels with a new focus on “writing to learn” which also addresses the use of document based questions (DBQs) across the content areas.

While the academy teachers did not specifically mention it in their reflective responses, another key consideration for Research Question 2 would be the potential use of mixed-ability groups for writing instruction at other grade levels. Specifically, the Alabama Direct Assessment of Writing for the 5th and 7th grade levels and the ACT with Writing at the upper levels would all be possible measures of writing achievement that may add further to this discussion. Additional indicators of writing achievement would also be helpful in further addressing this research question, and it is possible that these indicators could be outlined for future study.

The awareness of multiple measures of data has helped the academy teachers and their colleagues look at writing achievement specifically and find explicit ways to address the needs of struggling writers. As a result of this teacher emphasis on writing, Academy High boasts the highest scores on the state writing assessment in the school district.

Discussion of Research Question 3

Does the change from traditional academic/vocational tracks to a mixed-ability detracked student grouping create any changes in the beliefs, perceptions, and educational practices of teachers working within these educational contexts?

Returning again to Bernhardt’s (1998) multiple measures of data, the importance of perceptual data is clearly outlined. For the teachers participating in the academy structure, there were self-reported changes in beliefs, perceptions, and methodologies. The teachers as a group

reported the many benefits of mixed-ability groups, but they also freely reported the challenges, including the importance of effectively navigating parental, cultural, and political pitfalls upon implementing and sustaining mixed-ability academies (Oakes & Saunders, 2008). Teachers shared concerns about the needs for quality professional development and additional resources and reiterated that in order for the groups to be successful that they must be painstakingly formed based on actual prior student performance and not on other personal interests.

Most teachers reported some change in beliefs about student grouping, and many felt that they had gained a new respect for “regular” students and felt that overall these students should be challenged much more throughout their academic day. These insights mesh very well with the multiple findings on high school dropouts where many students have reported dropping out simply because they were bored (Balfanz & Legters, 2004). A visual representation of how academy teachers may change to work from a more student-centered lens can be seen in the word cloud to follow, which was created from the reflective response of Teacher 2 using Wordle:

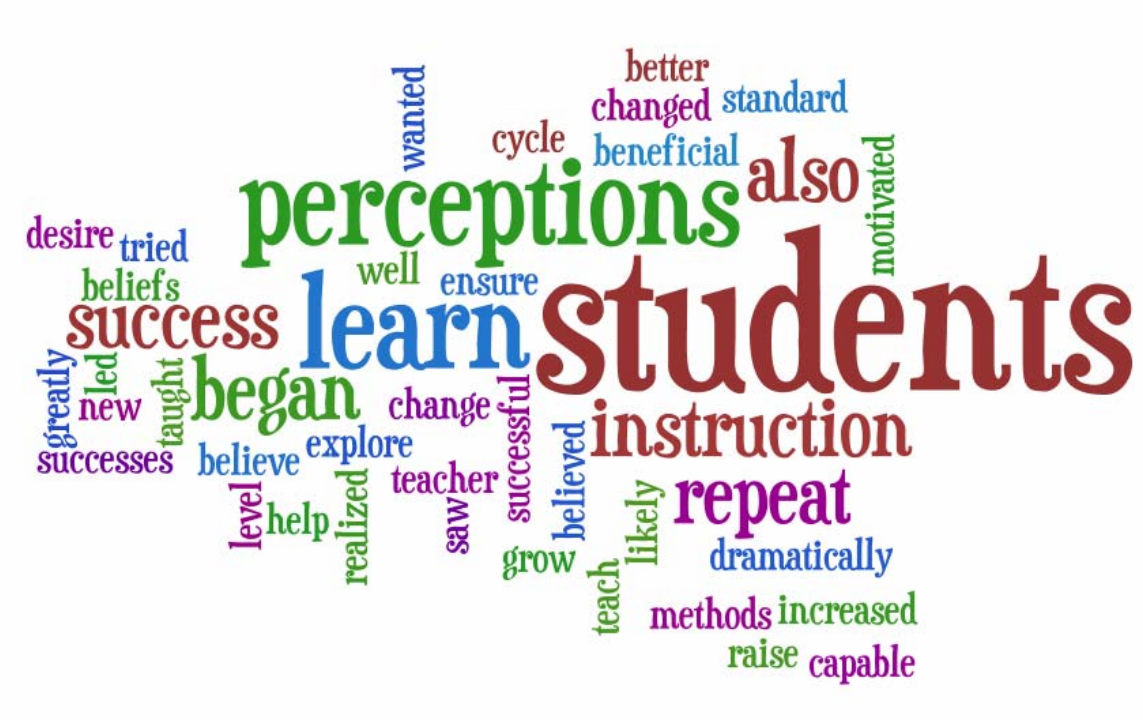

Figure 7. Word cloud for typical teacher response.

This graphic representation of word placement and prominence was created from a reflective teacher response to the survey question "How have your beliefs, perceptions, and instructional methods changed as a direct result of your experiences teaching in mixed-ability academies?" The actual response from Teacher 2, who has taught four years in the academy structure, read as follows:

> My beliefs about what "standard" students were capable of increased dramatically. I also saw the students' perceptions of themselves change. As they were successful, they wanted more and more to repeat that. Their desire for success motivated me to raise my level of instruction to help ensure that success. I believed if I taught it they should learn it. I realized that some students do not learn how I learn (and how I am most likely to teach) and as I began to explore new methods of instruction, I began to grow as a teacher. I also tried to repeat my successes. This led to a cycle that has been beneficial for my students as well as for me. I believe my perceptions and my students' perceptions changed greatly, and for the better.

Teacher 2 clearly sees that her original ideas about what “standard” students were capable of doing have changed after the academy implementation. She also reports that she saw her students change and begin to have better self-esteem and be more motivated for future learning. This, in turn, interacted with the teacher’s own motivation to make her want to work harder to meet the needs of all students in the mixed-ability classroom. She became more aware of the various learning styles that she appears to have been less aware of under the standard/advanced teaching structure--an assertion supported by Oakes (1985). Toward the end of her comment perhaps lies one of the most significant ideas. As a result of this experience, the teacher reports a new awareness of reflection and action research that will help her grow professionally as an educator and further improve her cycle of success.

This response was echoed by the other teachers in the study and is supported by the research that teachers working in inquiry-based collaborative teams, especially academies and small learning communities, often experience increased professional growth (Marzano, 2003; McDaniel, 2008; Nelson, 2009; Oxley, 2005; Swann & Snyder, 1980; Watanabe, 2006). Teacher 1, who has the most years teaching in the academy structure, capitalizes on a salient feature of the word cloud that the word “students” dominates the graphic because academy teachers need to be more student-centered and must develop what Ancess (2008) refers to as “personalization” strategies:

Teacher 1

> My beliefs and perceptions did not change very much. As a teacher of 10th grade students who ALL take the AHSGE, with no exceptionality, I felt all students must be pushed to attain the highest level of achievement possible. What did have to change were my methods. I had to focus on ways to reach the multitude of ability levels and learning styles in each classroom. I had to make my lessons more visual, active, and interactive. This required more time planning and implementing lessons. I had to gather resources that would more easily lend themselves to these new methods and I had to be willing to try things that were out of my comfort zone.

Like the other teachers in the group, Teacher 1 mentions the importance of high standards and speaks of pushing her students "to attain the highest level of achievement possible." While she says that her beliefs and perceptions did not change much, it is important to clarify that, similar to Teacher 3, that is because she feels that her beliefs and perceptions were already better aligned with the mixed-ability academy model than they were with the standard and advanced grouping structure. Teacher 2 points out how the academy structure challenged her to create lessons that were more "visual, active, and interactive." This is surely something that could benefit almost any type of student grouping but which would be especially important for mixed-ability groups.

The teacher spoke of "hands-on" learning during the focus group discussion, and expressed that she was challenged to provide multiple hands-on activities for the social studies. She speaks of "gathering resources" and grant writing in the focus group discussion in order to provide her students with the additional resources necessary to address a mixed-ability classroom. A final significant point from the comments of Teacher 1 is her apparent move away from the somewhat naïve beliefs of some teachers that standard, advanced, and honors groupings of students are truly homogeneous. As Oakes (1985) pointed out, teachers tend to believe that these groups of students have more in common than they actually do when it comes to motivation, abilities, and learning styles. From examining the response of Teacher 1, it seems logical to conclude that she is becoming more aware of the natural heterogeneity of students in general, and this may serve to help her better address the needs of all students across varying grouping contexts in the future.

Teacher 3 continues echoing some of the same sentiments in her reflection below:

> My beliefs, perceptions and instructional methods did not change much. Mixed-ability academies matched what I believe much better than the standard/advanced class set-up. I

> believe that every child will rise to the expectations for every child. Getting past the "I'm standard. Why do I have to do . . .?" is not a problem in the academies.
>
> The only real change I made, was to make sure that I provided more examples to all students than I would in a class with advanced only students. I also share more of my own writing, art and so on when sharing expectations of a given project or assignment.

Like Teacher 1, Teacher 3 does not self report significant changes in personal beliefs, perceptions, and instructional methods. Similarly, this teacher reports that the academy structure better aligns with her current beliefs about student grouping. It would be interesting to further explore the extent to which these teachers held these beliefs prior to their experiences with the mixed-ability academy structure and to what extent these beliefs have been shaped by those experiences. Again, like Teachers 1, 2, 4, and 5, Teacher 3 addresses the role of heightened expectations for students as part of the mixed-ability academy structure. She mentions the idea that students will live up to their labels and feels that high expectations are important. Even though this teacher only taught one year in the mixed-ability academy structure, she too expresses a belief that this structure is better than the traditional standard/advanced classes. Teacher 3 also addresses how the experience helped her begin to share her own writing with students. Again, this reflects the other measures of data and the importance of writing echoed in the other responses. It seems possible to conclude that the academy students have access to more experiences with writing than a traditional "standard" student might have. It is these varied opportunities to write for different purposes that help young writers grow, and as Scherff and Piazza (2005) have noted, not all students tend to get the same opportunities to respond in writing.

Teacher 4, who only has 2 years in the academy structure, had the following response:

> As a teacher of a 9th grade academy and an 11th grade advanced/standard setting, I have seen how the academy has helped even when those students are grouped back into their advanced/standard classes. Students continue to achieve because they have seen in the

> academy what they can do. I have seen a trend where I as a teacher have tried to hold those standard students to higher expectations.

Interestingly, Teacher 4 reported in the focus group that she feels more removed from the academy experience, and it seems possible to interpret from her response that she may not hold the same beliefs and perceptions about it as perhaps Teachers 1, 2, and 3 do. Teacher 4 does speak of the "lasting effect" of the academy process and mentions that she sees the benefits of it in her current students who are now removed from it and back in standard and advanced classes. Like Teacher 2, Teacher 4 seems to be addressing the issue of self-esteem or self-image and how the academy structure tends to help students--at least the "standard" students feel better about their potential for success in the mixed-ability classroom. Teacher 4 also addresses the concept of holding students to higher standards and their potential to reach those goals. Interestingly, Teacher 4 does seem to be further removed from the "standard" students than the other teachers as she refers to them twice as "those students" or "those standard students." There seems to be less of a collectivist perception in these statements, and it is possible that fewer experiences as an academy teacher combined with a lack of proximity and team support have not permitted Teacher 4 to grow professionally as much as the other teachers because of these experiences.

In the following brief comment, Teacher 5 concludes the teacher responses to this question as posted on the reflective blog.

> Teaching in an academy classroom has encouraged me to find more ways to be challenging to certain students. It has also challenged my creativity. I see the success in test scores, however, I often wonder if it is beneficial to the long term results of students' success.

This teacher at least hints at reflection and professional growth through being challenged in terms of "creativity." She also shows awareness for the test data as outlined be Bernhardt (1998). At the same time, this teacher questions the long-term effects of the academy structure. What is

interesting about this response is that the teacher has not questioned either here or in the focus group discussion any possible long-term effects of the standard/advanced structure. In Oakes's (1985) opinion, it is the "tracked" groups that tend to suffer the most negative consequences over time, but because of tradition, beliefs, and perceptions, this possibility often goes unquestioned.

As mentioned earlier, the teachers in the reflective postings and in the focus group meeting, tended to be reluctant to admit any change in beliefs or perceptions about ability grouping. Teacher 2 said, "I've always been aware, it just made me more open . . . ." Teacher 1 mentioned growing up and going to school in the standard and advanced structure, but she expressed that she likes the mixed-ability groups and that they work very well for her. According to her comment in the focus group meeting, she felt that it was easier to push the "standard" students to reach higher expectations in the mixed-ability groupings. This tends to support the various findings of Oakes (1985; 2005) and others on the benefits of mixed-ability groups for student achievement.

Upon further reflection during the focus group discussion regarding how the teachers' beliefs, perceptions, or instructional practices had changed as a result of teaching in the academy structure, Teachers 5, 4, 3, and 2 responded at length:

Teacher 5:

> I guess my ideas about standard and advanced changed because you have, well, the labeling, and we all look at the rolls, and I see students who maybe should be advanced in like English and history but struggle in math or science, so they're standard. I'm always asking kids, "Why are you not advanced?" They'll say because of math or something else. So, I guess, I've been able to see the student advance in their own area instead of just being an "advanced" student--if that makes sense.

This teacher begins to get at the heart of the equity issue again by clarifying how she has come to understand the "labeling" that takes place with standard and advanced classes. She addresses how being gifted and talented in one area may not mean that a student is gifted in all

areas. It also appears that she is coming to a fuller understanding that not all students are able to truly shine in all areas. With this in mind, it may help educators to reflect upon their own strengths and weaknesses and try to keep these in mind when considering those of their students.

Teacher 2 responded to this question at length during the focus group interview and also addressed the issue of dealing with student labels.

> It makes perfect sense. I think students tend to live up to their labels too. I have seen that to be a difference that I have seen them carry with them even to the eleventh and twelfth grade and back to standard and advanced. I think that this year's group proves that the mixed-ability groups stuck with them. They don't . . . they seem to get along across the lines a lot better than when I first came here and I notice that, and I think that looking at them from a twelfth grade standard and advanced, remembering them in tenth grade, uh, they seem to work harder, and I agree with [Teacher 5], I wonder why are they on standard? They shouldn't be on standard. And it may not have been my class but another class where that was an issue, and it made me re-think that, you know, that we may be really strong in one thing and not in another, and I like it, I guess, but then sometimes, I think it allows or it maybe--I worry if I'm going middle of the road instead of the higher standard because we have the lower group in there that I have to take the whole class to a lower level, and I try to remember to teach that fair doesn't mean the same--doesn't mean doing the same thing, but that's really difficult for a sixteen-year-old to explain that you need to do an extra assignment because you're really good at this and they're not. To me that's not fair either. You know, that's just . . ., so I worry, my concern is . . . I like how it holds everyone to a higher standard as far as they're all taking the same test and that way and the way they treat each other, and I worry academically if they are getting pushed as hard as they need to when you have AOD (Alabama Occupational Diploma), standard, and advanced all in the same class.

This lengthy response helps to clarify how teachers sometimes have inner struggles with student grouping and strive to consolidate juxtaposing beliefs about what is best for students. While Teacher 2 clearly disagrees with the labeling and issues of equity, she also struggles with making it all play out in practice in a manner that will be the best for all students. For teachers who have more experience teaching to "homogenously" grouped students, there is often a false sense of security that all students' needs are being met, as has been noted by Oakes (1985) and pointed out earlier.

Like Teacher 4 earlier, Teacher 2 seems to appreciate the results of the mixed-ability academies after students leave the tenth grade and move back into standard and advanced courses. Both teachers seem to report feeling that students "get along" better and maintain higher expectations for themselves after experiencing the academies. This appears to hold true as well when looking at the other measures of data discussed so far. Students perform better on standardized tests, tend to complete all course requirements and even graduate on time without dropping out. While it is not addressed directly in the data here, anecdotal experience and academy teacher perceptions are that more students at Academy High take college placement tests and enroll in at least a two-year college post academy intervention than did pre-intervention.

Teacher 4 also speaks to the idea that the mixed-ability academy experience somehow prepares students to maintain their motivation to learn better than students who have not had this experience.

> But I've also seen in the eleventh grade, the ones that were grouped but now they've gone back, I've seen them pushing themselves to do just as well in my standard physical science because the grades are fairly high. That is still with them; it still sticks with them as far as their motivation to do better and make better grades.

Even though Teacher 4 reported very little change in beliefs and perceptions overall, this is a substantial statement that there appears to be evidence for her that the former academy students have benefitted from the academy intervention. Just like the other teachers mentioned, there is the idea that what ever happens to motivate students that it tends to go with them beyond their tenth-grade experience.

Finally, Teacher 4 addresses professional development experiences that have helped her incorporate her changes in beliefs and perceptions into actual practice, and she offers her colleagues a layered curriculum strategy which seems to be working for her.

> For me it goes back to what was said earlier. If they are not grouped evenly then it is a problem. If you have all of the academically challenged students in one class and the behaviorally challenged students in one class, then it's a challenge to get through the class. If they are grouped where the abilities are truly mixed, then it's not a problem, and I think, I mentioned the workshop I did this summer, that's helped me probably more than anything because not every assignment but some assignments, you can take it and say O.K. if you do this you get a C. If you do all of the C work plus this, then you can get a B. If you do everything for the C and for the B plus this, then you earn up to an A, so really those students who are challenged academically they can earn that A, the "advanced" but lazy if they want to stick with that C, then they can. It's ownership of their grade. It goes back to what was said before, if they are not grouped right, then it's a problem.

Teacher 4 re-visits the idea that the grouping is crucial to the success of mixed-ability instruction, whether in an academy setting or not. Purposeful grouping has clearly emerged as a major concept for the success of such an endeavor. Besides reiterating the importance of grouping, Teacher 4 favors the layered curriculum because it gives some of the power and "ownership" over grades back to the students. More than once, she says that getting the grouping right is critical, and if that is not done correctly, then just survival alone may be difficult in the classroom. The implication here is that with the correct use of purposeful grouping, teaching can actually be easier and more enjoyable. These reflective comments about the perceived changes in teacher beliefs are important for better understanding the teacher perspective on changing traditional student grouping practices and the possible outcomes that may result.

Additional findings of importance from the teacher qualitative analysis concern the team approach to academies and small learning communities. While the teachers emphasized the importance of collaboration, communication, and collegiality, they did not clarify whether these factors preceded the actual academy structure or emerged as a result of the academy structure. From personal experiences with the academy structure and the teachers involved, it seems to the researcher that probably a little of both possibilities are at work. Secondary teachers tend to work in isolation, but they also tend to migrate toward like-minded educators (Ancess, 2008). For this

particular case, it is possible that like-minded teachers were presented with a structure which encouraged more collaboration, communication, and collegiality, and the intense work and scrutiny of teaching in the academy forged even greater relationships among the teachers. While not indicating that academies are the direct cause for increased student achievement, the multiple measures of data addressed here do at least point to the academy structure as one which nourishes and supports many of the philosophical and cultural elements necessary for increased student achievement. These findings support the ideas of Ancess (2008) that "small alone is not enough" (p. 48). As Slavin (1990, 2000) has pointed out, simply regrouping students alone will most likely not increase achievement. It is what we do with those students once they are regrouped that truly matters, and the teachers interviewed surely echo this sentiment.

Limitations of the Study

Primary limitations for this mixed-methods study on the overall effectiveness of heterogeneous small learning academies on secondary student achievement rest mostly in group size, method, and implications for making generalizations based on the study. Due to the many factors which limit schedule manipulation in high schools, true experimental designs are often difficult to achieve. It is also difficult to create large *N* sizes for small rural schools, even when looking at multiple years of data.

While an issue of concern throughout the study was the number of student subjects needed for statistical validity, it is interesting to note that school accountability decisions are based on *N* sizes as small as 40. While this is not ideal, if we are to look at subgroups and attempt to gain a full understanding of intervention and achievement from all angles and perspectives, then we must consider the disaggregation of the data to the extent possible.

Similar to the concern over group size is the issue of age appropriateness. This study focused exclusively on the "achievement" of tenth grade students as measured by the Alabama High School Graduation Exam (AHSGE) and the Alabama Direct Assessment of Writing (ADAW). Several factors influence the overall outcome of results when focusing upon this age group. Teachers who have experience with this age group of students will understand the joys and frustrations of trying to focus a group of teenagers who are all at different stages of independence as they turn sixteen and begin driving. While all age groups offer specific challenges, it is wise to caution that the results discussed here are specific to the age group of the study population, and again, similar results may not be found if focusing upon another age group. Students in the study group were possibly motivated by teacher-promised rewards of achievement, fieldtrips, recognition, and early-release on exam days after doing well on the Writing Assessment and passing all parts of the Alabama High School Graduation Exam. While these motivational rewards appear to have had some influence on student achievement, it is uncertain what type of similar "rewards" if any might have an impact on other age groups. At the same time, there is a limitation to drawing a conclusion that these motivational strategies really had any impact on student achievement without the specific inclusion of student voices in the research.

In terms of methodology, this study attempted to answer a variety of research questions with different levels of interactions and with multiple measures of data. For future study which might stem out of this research, some of these limitations could be surmounted with a clearly, more focused approach to singular variables within the study.

This study does, nevertheless, fill a niche in the research on small learning communities, academies, and mixed-ability groups. Much of the current research has been conducted in large,

urban schools with diverse populations. This study, while addressing a different location and population, is very limited in how it can be generalized to other groups. However, the findings do offer hope for practitioners looking for strategies to increase student achievement as based on standardized tests and other factors leading to increased graduation rates, a very important issue for the nation at large (Jacobson, 2008; Ringstaff, 2008; Rumberger & Palardy, 2005; "States Grapple," 2008; Viadero, 2009).

Additional limitations include the absence of student, parent, and administrator voices in the research. This additional information would serve to further ground the study and help researchers look more closely at the long-term effects of different types of ability grouping as well as small learning communities and academy structures. Having additional perspectives would also strengthen the perceptual data and be useful in cross-referencing and verifying the teacher perceptions presented here.

These additional voices would help to address the barriers to de-tracking schools as pointed out by Oakes and Saunders (2008). The important roles of school policies and processes, parent and community stakeholders, and the administration are crucial to gaining a better understanding of the results outlined in this study.

As mentioned elsewhere in this paper, another limitation is the ever-changing face of school accountability and graduation requirements. Only a few short months ago, Alabama began the move away from exit exams and began the move toward end-of-course assessments. This decision was not even being considered when this research began, and, in fact, the state was developing new editions and subtests of the graduation exam at the time.

While this move toward end-of-course exams will most likely serve students much better than exit exams, it is still important to consider how the limitations of this study may or may not

affect further study in the direction of end-of-course assessments. At the same time, it is also important to consider that as previously pointed out through the work of the Center on Education Policy (2007) many students live in states that are still administering or will be administering exit exams. This study focused exclusively on students taking exit exams in a small, rural school in Alabama. The results presented here will not fit other educational contexts, and the results would most likely not be reproduced exactly as they are here.

Recommendations for Policy and Practice

While the results reported here do seem to support the use of mixed-ability academies for increasing student achievement as measured by high school exit exams and state writing assessments, it is not clear whether or not it is the small learning academy structure that produced these gains. It is also not exactly clear that these "gains" are the best measures of student achievement. As Ancess (2008) has pointed out, the original grassroots efforts found in New York over 30 years ago to restructure schools into small learning academies have been lost in the current flush of "small learning communities."

Ancess (2008) has noted that while small learning academies may be preparing students to pass exit exams, they are not necessarily preparing them for success in college and the workforce. In Ancess's work, students from small learning academies themselves reported that the skills that they learned in the academy structure, such as summarizing, answering multiple-choice questions, and writing five-paragraph essays were of little or no use in college. If academies are going to be truly successful at increasing student achievement in terms of both completing requirements for high school graduation and preparing for college and work, then the teachers, counselors, and administrators working within these contexts should examine the

research contexts available, which point out the crucial elements for success: caring relationships, a unified school community, a strong safety net, and intellectually transformative experiences (Ancess, 2008). In the case of Academy High, it is clear from the data and from reflective teacher responses that while a bigger picture does exist, it may not fully frame this larger definition of achievement.

In order to make academies more successful at meeting these larger goals, practitioners and policy-makers should consider the barriers to success. First, they must examine the larger purposes behind restructuring the school day before embarking on this initiative. Once the decision is made, they must plan for a carefully orchestrated campaign to explain the benefits of such a restructuring to all stakeholders involved. As has been seen in this study, students, parents, and teachers all have perceptions about ability grouping, and all have beliefs about what is best for student learning. The teachers, students, parents, and administrators who decide to implement small learning communities or academies must remain grounded in their desired goals and outcomes. While accountability is an issue for many schools (Albrecht & Joles, 2003), the original vision of the pioneers who first considered high school restructuring should remain at the heart of the reform.

Policymakers should consider how they will address parents' concerns over equity issues and grouping issues. How will they convince the parents of the "privileged" to share their best teachers and resources with the "disenfranchised?" How will the parents of the lower performing students be convinced that their children can succeed in more challenging classrooms? While these questions are not easily answered, they cannot be avoided if heterogeneous small learning academies are to flourish. Stakeholders must abandon their scarcity paradigm and adopt a win-win approach to preparing all children for success after high school. Oakes and Saunders (2008)

have provided us with several models for hope in *Beyond Tracking: Multiple Pathways to College, Career, and Civic Participation.* Still, there are many challenges ahead.

Barriers and obstacles to this equity must be removed whenever possible, and students should be encouraged to face new and challenging educational opportunities. Just as the College Board's policies on equity in Advanced Placement have resulted in increased numbers of minority students taking and scoring well in AP courses, so too should new policies on equity increase achievement for all students in other areas. While 21st century learning has opened many doors to students across the globe, students will not be prepared to enter these doors unless we prepare them. Simply restructuring the school day alone will not prepare students for the challenges that they will face in a global society. Practitioners and policymakers must consider the most sound approaches to student grouping and should follow Good & Brophy's (2003) advice to delay ability grouping as late as possible and then use it purposefully and with a clear understanding of the ramifications that it has on student achievement, culture, and ideas of self-worth.

When decisions are made to mix ability groups, clear guidelines and processes must be set and followed. As was discussed by the teachers in this study, once other factors and other people's ideas of grouping and reasons for group adjustments factor into the process, the original intent and outcomes will be diminished or lost entirely. Even though the years of data used for this study did reveal statistically significant gains for the mixed-ability groups, perceptual data supports that these gains are diminishing as the academy structure ages at Academy High. These perceptions were initially based on the simple process of losing momentum after several years of practice, but after discussions with the teachers involved and examinations of other archival data such as curriculum maps and pacing guides, it became clear that in recent years all groups have

not been truly “mixed-ability” and have not always been instructed equally. These results are supported by the findings of Oakes and Saunders (2008) that there are still many personal, social, and philosophical barriers to de-tracking America’s schools, even in locations where the majority of students, teachers, parents, and administrators have embraced the practice. Clearly, there is still much work to be done in most high schools before further progress can made in this de-tracking process.

Teachers in this study also expressed a sincere concern that the teachers chosen to embark on such a journey must be dedicated to instructing students and committed to making the mixed-ability groups work. Teacher 1 used the word “committed” three times in a short response to emphasize that this is not a job for the faint of heart. Teaching in a mixed-ability academy setting is not for the teacher who is interested in coasting and using last year’s lessons plans. Several of the teachers alluded to the idea that it is hard work. It is not just like teaching in ability grouped classrooms. When teachers, administrators, and community stakeholders agree to take such a risk as to place students into groups that they have not been in previously and plan strategies to address all learning needs in the room, then it is definitely an enormous undertaking. Scheduling Occupational Diploma and special education students into the same classrooms as the gifted and talented will not be favored by all members of the educational community, and key stakeholders may challenge such an endeavor.

Still, as we refer back to Bernhardt and the multiple measures of data model, it is important to consider how our current policies and processes either promote or hinder student achievement. Students need every opportunity possible to engage in challenging and rigorous educational contexts with caring and professional educators. They need the support of all teachers, school administrators, their families, and the communities at large.

In order for education to continue to move forward, we must make a break from the dichotomous thinking of the past and embrace the possibilities of the future. This can only be done when we share knowledge with all stakeholders and convince them that we are truly trying to address the needs of all students and that we do not claim to have all of the answers but that we are willing to discuss directions for the future with all interested parties. We must work together in order to face the challenges of our ever-changing global society.

Recommendations for Further Research

Many opportunities for further research are provided by the findings outlined in this study. While the results were used to attempt to answer three important research questions, as with most research, other questions were framed along the way. As Miles and Huberman (1994) have provided us with a framework for trying to better understand a particular phenomenon, they have also helped clarify different approaches to gaining this understanding.

With this in mind, there are many possibilities for addressing the questions here as well as new questions from multiple research frameworks. As mentioned earlier, this specific research provides rich avenues for extension and elaboration based on the multiple perspectives represented throughout the data sources. Additional points of view may also emerge as we forge further into the educational future.

With the increasing use of distance learning and other 21st century technologies, more opportunities exist at the present than ever before in history for truly offering students a more equitable education. Students have access to Harvard lectures and teachers from the best and most prestigious high schools no matter where they are located. In order to embrace these

opportunities, however, students must be prepared to work and thrive in a diverse, multi-cultural, global society.

Further research needs to be conducted on different types of student grouping with consideration for both short-term and long-term effects. Clearer definitions of “achievement” should be outlined for these studies, and true experimental designs should be mounted in order to better understand the interaction between grouping and student outcomes. While it is extremely difficult to isolate student grouping as a single variable, further attempts at accomplishing this need to be made.

At the same time, a variety of qualitative methods should be explored to continue addressing questions of student achievement, grouping, and teacher perspectives. These designs will add richly to emerging knowledge cited here regarding how mixed-ability grouping has affected sophomore students in a rural setting, and how it has changed the perceptions, beliefs, and instructional practices of the teachers involved. Further research in different settings will help confirm or dispel the findings of the current study in question and will add to the overall understanding of small learning academies and their potential for increasing positive student outcomes.

Academies and small learning community structures have produced mixed results in the research, and it is clear that these results often stem from varied levels of implementation and fidelity to the models. Researchers can work to clarify the exact tenets of these models that should be present in order to qualify for any study, and practitioners should also be encouraged to engage in practitioner researcher in order to better understand their own contexts for school improvement.

Special consideration should also be given to further exploring the issue of student grouping and the uses of the academy structure from other, more varied perspectives. Having voices from students, parents, community stakeholders, and administrators would add greatly to this body of knowledge and help educators better understand the different types of student grouping, the short- and long-term effects of student grouping, and the possible outcomes of different student grouping structures.

Surveys should be conducted with past mixed-ability academy students in order to discover if the experiences of both standard and advanced students truly helped create more positive outcomes for them. It would be of great interest to locate past graduates and explore how the experiences in the academy structure did or did not prepare them for life after high school. Further research should also be conducted which explores the social, cultural, and political ramifications of mixed-ability grouping in small learning community contexts.

Finally, it is important to consider that exit exams are beginning to be phased out and replaced with end-of-course exams in some states within the next few years. With this in mind, new research will need to be conducted in order to understand how this change will affect student achievement and student outcomes. Even though the tests may no longer be termed “exit exams,” students will still need to do fairly well on these tests, or they will be in danger of failing courses that are still required for graduating with a valid high school diploma. Current projections are that end-of-course assessments may count as much as 20 to 25% of a student’s final course grade. Student grouping, equity, and access will definitely influence these outcomes as they have influenced the outcomes related to exit exams in the past, and further research in these areas will be crucial to understanding and promoting increased student achievement and positive schooling outcomes.

With these and other efforts, the growing body of knowledge for small learning communities and academies will continue to help practitioners and policymakers create structures that best support student learning and long-term success.

Conclusion

In chapter I, an overview of the problem, significance, and purpose of the study were presented. A case was also delineated regarding the significance of the study, and this was supported with information about the prevalence of high school exit exams across the United States. Three research questions were outlined regarding student achievement as measured by performance on high school exit exams and the Direct Assessment of Writing. The limitations of the study were introduced, and several assumptions were outlined for the study. Chapter I also began with some rather general and broad statements about the purposes and goals of education as they fit into the context of the larger society, and an attempt will be made to revisit these ideas here from the perspective of the study's conclusion.

Chapter II presented an overview of the research literature connected to this study in a variety of areas: ability grouping, tracking, exit exams, small learning communities, and academies. This basis, much of it provided by the work of Jeannie Oakes, created a framework for the research and served to ground the study in the theory and practice behind different types of ability grouping. Specifically, the research addressed ability grouping, attitudes toward grouping, small learning communities and academies, high-stakes testing, and special populations. While very little relevant research was available dealing specifically with all variables of the study in question, many sources were presented to address the multiple facets of the study in question.

Chapter III used the conceptual framework outlined in the previous chapter to further present the methods, procedures, and purposes behind the study. Research questions were formulated and presented. The setting for the study and the study's subjects were described, and the academy intervention was defined as clearly as possible. The actual research methods, data collection and analysis, and the reliability and validity of the Alabama High School Graduation Exam and the Alabama Direct Assessment of Writing were also addressed. Victoria Bernhardt's (1998) multiple measures of data model was also presented and explained as a framework for organizing and presenting the major findings from the study.

In chapter IV, both quantitative and qualitative results were presented, which directly addressed the original research questions. Additional descriptive data sets were also presented to help strengthen the interpretation of the results in chapter V and to help connect the quantitative data with the qualitative data as well as to provide for triangulation and increased evidence for rejecting the null hypothesis (Anderson, Lepper, & Ross, 1980). Qualitative data from both the reflective teacher responses and the focus group discussion were presented.

This discussion began with a central idea regarding the polarity of education and the questions about its chief purposes. Authors from across the ages have attempted to answer this question, and much debate has transpired over the issue. Still, it seems difficult to agree upon what we want for our children. In the *Paideia Proposal*, Adler (1982) borrowed from Comenius's (1657) *The Great Didactic* to outline a vision for educating all men and women fully and equally. As our opening epigraph suggested, it is only then that we can claim ourselves to be an "educated" society. Interestingly, Adler published his manifesto only a few short years before Oakes's first edition of *Keeping Track* (1985). Both works seemed to speak to the same issues: inequity in American education and visions for correcting this inequity. While Adler presented

an entire approach complete with curriculum and instructional methodology, Oakes simply asked for equitable access. Unfortunately, there was not a simple response. Despite over 25 years of progress, there is still much work to be done before realizing either of these visions completely.

In their collection of essays on *The Public Purpose of Education and Schooling*, Goodlad and McMannon (1997) pointed to "divisiveness in education" as one of the major barriers to improving our schools. They also noted that in our dichotomous discussions, the connection between schooling and a "civil society" have almost been forgotten. It seems that we are still very much polarized over many educational issues, and ability grouping appears to be an issue that still creates one of the strongest emotional divisions. In order to move forward, we must continue to examine strategies and structures that best support our students, and we must use these strategies and structures to create better outcomes for our students and, in turn, create a better, more equitable society in the end.

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APPENDIX A

LETTERS OF PERMISSION

Blount County Board of Education

Office Location: 204 Second Avenue East
P.O. Box 578
Oneonta, Alabama 35121-0578
Phone (205) 625-4102
Fax (205) 625-4100

JAMES E. CARR
SUPERINTENDENT

RODNEY P. GREEN
ASSISTANT SUPERINTENDENT

28 August 2009

To Whom It May Concern:

Stoney M. Beavers, Secondary Curriculum Coordinator of Blount County Schools, has my permission as the Blount County Board of Education Superintendent to use the on-going best practices academy model at Cleveland High School in his doctoral study at the University of Alabama. Mr. Beavers may use student test data which is currently available to him in his role as Coordinator of Curriculum and Instruction in our school system for this study with the understanding that all testing and security measures must be followed for the use of student data and that individual student identities will be protected throughout the study. I am confident that the study conducted by Mr. Beavers will help our system further evaluate the successfulness of our Freshman and Sophomore Academy structure and help us better serve all students in our system.

Please do not hesitate to contact me if you have any further questions concerning this study or the use of student data.

Sincerely,

James E. Carr,
Superintendent

Cleveland High School
OFFICE OF THE PRINCIPAL
71 HIGH SCHOOL STREET
CLEVELAND, ALABAMA
35049

DENISE MARTIN, PRINCIPAL

TEL. 274-9915
FAX 274-0201

31 August 2009

To Whom It May Concern:

Stoney M. Beavers, Secondary Curriculum Coordinator of Blount County Schools and AP English teacher at Cleveland High School, has my permission as principal to use the academy model that he helped create at our school in his doctoral study at the University of Alabama. Mr. Beavers may use existing student data in his retrospective study with the understanding that student names will be removed and that numeric identifiers will be used to gather, organize, analyze, and report on the data.

We feel that Mr. Beavers' analysis will help us better understand the success of our model and continue to improve it in order to best serve our students. Please do not hesitate to contact me if you have any further questions concerning this study or the use of student data.

Sincerely,

Denise L. Martin,
Principal

Blount County Board Of Education
Office Location: 204 Second Avenue East
P. O. Box 578
Oneonta, Alabama 35121-0578
Phone (205) 625-4102
Fax (205) 625-4100

JAMES E. CARR
SUPERINTENDENT

RODNEY GREEN
ASSISTANT SUPERINTENDENT

27 August 2009

To Whom It May Concern:

Please be advised that Mr. Stoney M. Beavers currently works with me in his role as Secondary Curriculum Coordinator to track and analyze data on multiple assessments for the Blount County Board of Education. Mr. Beavers has signed the test security policy provided by the Alabama State Department of Education and is familiar with testing security, FERPA policies, and testing protocol.

Mr. Beavers has permission to analyze and report on data from the Alabama High School Graduation Exam, Alabama Direct Assessment of Writing, and other state assessments if necessary, for his doctoral dissertation study being conducted through the University of Alabama, given the understanding that individual student identities must be protected and that all individual identifiers must be removed from all data.

Sincerely,

Steven E. Latta,
Assessment Coordinator

APPENDIX B

TEACHER SURVEY QUESTIONS

Mixed-Ability Academy Structure
Teacher Perceptions

I. Background Information

1. How many years have you taught standard and/or advanced classes?

2. How many years have you taught in mixed-ability academies?

3. Are you currently teaching part of your day in the academy structure? If not, how many years has it been since you taught in this structure?

II. Global Perceptions

4. In your opinion, what is the ultimate goal of education?

5. What role do educators have in building a strong community and society?

III. Grouping Perceptions

6. What do you feel are the advantages of standard and advanced classes?

7. What do you feel are the disadvantages of standard and advanced classes?

8. What do you feel are the advantages of the mixed-ability academy structure?

9. What do you feel are the disadvantages of the mixed-ability academy structure?

10. Which structure do you think best serves the needs of the majority of students and why?

IV. Student and Teacher Outcomes

11. How do you think these two types of groupings affect student motivation?

12. How do they affect student behavior?

13. How do they affect student achievement?

14. How have your beliefs, perceptions, and instructional methods changed as a direct result of your experiences teaching in mixed-ability academies?

15. Do you have any other considerations for measuring the effectiveness or ineffectiveness of the mixed-ability academy structure?

Note: Modeled after the *Ninth Grade Success Academy Questionnaire* developed by Rachael Garrett McDaniel, Doctoral Dissertation, Auburn, Alabama, 2008.

APPENDIX C

RESEARCH CONSENT FORM

University of Alabama
Informed Consent Form
for Non-medical Human Subjects

CONSENT FORM

FOR QUESTIONS ABOUT THE STUDY, CONTACT: (Stoney M. Beavers, 416 Swann Bridge Rd., Hayden, AL 35079, phone 205-559-8373).

DESCRIPTION: You are invited to participate in a research study on the effects of student grouping on overall achievement on standardized tests such as the Alabama Direct Assessment of Writing and the Alabama High School Pre-Graduation Exam. You will specifically be asked how teaching in the academy structure has changed your perceptions and beliefs about student grouping. You will also be asked to participate in a reflective practice teacher blog and follow-up with one face-to-face clarification meeting. During the follow-up meeting, your responses will be digitally recorded for transcription purposes only. Once transcription is complete, the digital record will be deleted. All teacher responses will be coded as Teacher 1, Teacher 2, etc.

RISKS AND BENEFITS: There are no risks to participating in this study. We cannot and do not guarantee or promise that you will receive any benefits from this study, but it is possible that you will gain further understanding of the outcomes of different student grouping structures. Your decision whether or not to participate in this study will not affect your employment.

TIME INVOLVEMENT: Your participation in this study will take approximately five hours.

PAYMENTS: You will not be paid for your participation in this study.

SUBJECT'S RIGHTS: If you have read this form and have decided to participate in this project, please understand your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty. You have the right to refuse to answer particular questions. Your individual privacy will be maintained in all published and written data resulting from the study.

If you have questions about the study right now, please ask them. If you have questions about the study later on, please call the investigator, Stoney M. Beavers at (205) 559-8373. If you have any questions about your rights as a research participant you may contact Ms. Tanta Myles, The University of Alabama Research Compliance Officer, at 205-348-8461 or toll free at 1-877-820-3066.

UNIVERSITY OF ALABAMA IRB
CONSENT FORM APPROVED: 9/15/09
EXPIRATION DATE: 9/14/2010

I give consent to be videotaped during this study:

please initial: ____Yes ____No

I give consent for digital recordings resulting from this study to be used for transcription purposes and then to be deleted:

please initial: ____Yes ____No

The extra copy of this consent form is for you to keep.

SIGNATURE _____ DATE _____

Protocol Approval Date: _____

Protocol Expiration Date: _____

UNIVERSITY OF ALABAMA IRB
CONSENT FORM APPROVED: 9/15/09
EXPIRATION DATE: 9/14/2010

APPENDIX D

IRB APPROVAL LETTER

Office for Research

Institutional Review Board for the
Protection of Human Subjects

THE UNIVERSITY OF
ALABAMA
RESEARCH

September 15, 2009

Stoney Beavers
416 Swann Bridge Road
Hayden, AL 35079

Re: IRB#: 09-OR-257, "The Effects of Heterogeneous Small Learning Academies on Secondary Student Achievement"

Dear Mr. Beavers:

The University of Alabama Institutional Review Board has granted approval for your proposed research

Your application has been given expedited approval according to 45 CFR part 46. Approval has been given under expedited review category 7 as outlined below:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies

Your application will expire on September 15, 2010. If your research will continue beyond this date, complete the relevant portions of Continuing Review and Closure Form. If you wish to modify the application, complete the Modification of an Approved Protocol. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, complete the appropriate portions of the Continuing Review and Closure Form.

Please use reproductions of the IRB approved stamped consent forms to obtain consent from your participants.

Should you need to submit any further correspondence regarding this proposal, please include the above application number.

Good luck with your research.

Sincerely,

Carpanato T. Myles, MSM, CIM
Director & Research Compliance Officer
Office of Research Compliance
The University of Alabama

152 Rose Administration Building
Box 870117
Tuscaloosa, Alabama 35487-0117
(205) 348-5152
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APPENDIX E

ACADEMY TEACHER REFLECTIVE BLOG POSTINGS

Academy Teacher

Reflective Blog Postings

Research Question 3

I. Background Information

Q1. How many years have you taught standard and/or advanced classes?

Teacher 1

I have taught 11 years total.
Six years divided between standard and advanced.
Five years of academy classes.

Teacher 2

I have taught 11 years total. All 11 years I have had some standard and advanced classes and I have had academy classes for the past 4 years.

Teacher 3

English and Related:
English 9 Standard: 2 years
English 9 Advanced: 1 year
English 10 Standard: 1 year
English 10 Advanced: 1 year
English 10 Advanced Honors: This year
English 12 Standard: 1 year
English 7: 4 years + this year
English 8: 4 years + this year
Reading 7: 1 year
Reading 8: 1 year
Other Classes:

13 Spanish: 1 year

14 Computer Applications: 1 year

15 Keyboarding: 1 year

Teacher 4

1 18 years

Teacher 5

1 6 years

Q2. How many years have you taught in mixed-ability academies?

Teacher 1

1 Sorry, didn't read ahead :)

2 I have taught in the mixed ability academies for 5 years.

Teacher 2

1 I have taught in mixed-ability academies for 4 years.

Teacher 3

1 I taught in mixed ability academies for 2 years. However, my

2 7th and 8th grade students for the last four years and this

3 year are mixed ability.

Teacher 4

1 2 years

Teacher 5

1 2 years

Q3. Are you currently teaching part of your day in the academy structure? If not, how many years has it been since you taught in this structure?

Teacher 1

1 I currently teach all six periods in mixed-ability academies. I

teach all 9th and 10th grade social studies students using this grouping method.

Teacher 2

I currently teach 3 periods in the mixed-ability structure and 3 periods in the standard / advanced structure. I teach 10th and 12th grade sciences.

Teacher 3

No. I am not teaching in an academy setting. It has been six years since I taught in an academy setting.

Teacher 4

yes

Teacher 5

4 years

II. Global Perceptions

Q4. In your opinion, what is the ultimate goal of education?

Teacher 1

The ultimate goal of education, in my opinion, is to provide students with knowledge and skills to help them become successful members of society. We should strive to give students all the tools necessary to meet the goals they have set for themselves. For some students, success in college is the primary goal. For others, immediate access to the work place is the key to his/her future. In the field of social studies, we try to help students understand the foundations upon which our nation was built, the processes of our constitution and government, and the importance of all citizens exercising his/her right to vote. Ultimately, our goal is to produce

fully informed, well-rounded, successfully functioning, members of society.

Teacher 2

The ultimate goal of education is to teach people how to evaluate information, make informed decisions, and be productive citizens. I believe the ability to have civil discussion / debate, communicate effectively, and think critically are all a part these goals. Teaching subject matter is important, but these skills will be what students use throughout their lives; whether they are making a decision about their personal health care, their finances, who to vote for, or how to communicate with their child's teacher.

Teacher 3

The ultimate goal of education is to teach students to be independent thinkers that can find and analyze information to assist in making informed choices in their professional, political, and personal lives. While it is important to be independent thinkers, it is also important for students to able to express those opinions in a respectful, appropriate manner.

Teacher 4

The ultimate goal of education is to teach young people to think for themselves and to analyze the information they are given so that they can make the right decisions. Students should given the opportunity to become independent thinkers who are able to function in our society. It is important that students become vital members of our society.

Teacher 5

The ultimate goal of education is to teach and demonstrate the

skills needed to become a productive citizen.

Q5. What role do educators have in building a strong community and society?

Teacher 1

I think that the role of educators in building a strong community is to provide a quality education for all students and to be accountable for his/her actions. Parents and community members need to feel that they are investing wisely when they give their time, money, energy, and allegiance to the community school. Teachers need to listen to input from parents/community members, assess that input in an objective manner, and implement changes if/when that input provides positive changes for the students and community. Our students leave our school and become members of the work community. We need to produce well-educated, critically-thinking, active members of the workforce and community. The better we do our jobs, the stronger community and society we will live in.

Teacher 2

The role of educators in building a strong community and society is crucial. Teachers are responsible for teaching students relevant academic information, but more importantly they are responsible for teaching students how to evaluate information and make informed decisions. This is vital in making personal decisions as well as decisions relevant to their community, state, and nation. By developing literate students in many subjects, the community has a strong foundation on which decisions are made. If all students are treated equally and taught in a safe environment, the desire to learn and share is fostered. This allows students to be comfortable as contributing members in society.

Teacher 3

In my opinion, there are many parts to the answer. The first part being that teachers should provide strong role models for their students and community. If teachers are not good role models, it will be difficult, if not impossible, to gain the trust and respect of students and members of the community.

The second part is in preparing students to be active, thoughtful, and productive members of the community. Educators should strive to meet the needs of all his/her students while preparing the student for his or her future.

It is also important for a school to invite the community to participate in the education of their young, whether or not that community member has a child in the school or not. This partnership between community and school will strengthen both the community and the school.

Teacher 4

We, as teachers, are members of the community even though we might not live in the community. We are role models that the students should be able to look up to. Parents should feel that they are able to approach that teacher in order to talk about their concerns.

Teacher 5

My role in building a strong community is to demonstrate the skills that I teach, to provide a secure and confident atmosphere for my students, and to create a sense of openness for the parents to share in the education of their children.

III. Grouping Perceptions

Q6. What do you feel are the advantages of standard and advanced classes?

Teacher 1

The advantage would be that advanced students may move at a faster pace, geared to prepare them for the pace of college courses. The advanced students also get a foreign language, which is not offered to standard students.

Teacher 2

The advantage to standard and advanced classes is the ability to move at a faster pace and push students in both classes at a pace that is more comfortable for each group. All students can move at a pace more suitable to them. There is less risk of going too slow or too fast.

Teacher 3

One of the advantages is pacing. Students in the advanced classes are challenged by the pace of the work. We move much quicker in the advanced classes. This allows them to become accustomed to the pace of future college classwork. Students in the standard classes work at slower pace that allows them more time to assimilate the information.

Another advantage is the level of independent work. Advanced students are expected to complete more assignments with only guidance from teachers. They may also have more projects that are completed independently with fewer checkpoints. This is further preparation for the amount of responsible independence they will experience in college.

Teacher 4

The advantage to separated academic classes would be that

advanced classes are able to cover more material over the same time period. Standard classes are usually covering the material at a slower pace.

Teacher 5

Having standard and advanced classes allows the high level learners to move at a rate in which they are constantly being challenged to learn more at a higher expectation. It also a provides learning environment for those who are standard to make sure they learn and understand concepts in which they may not fully understand if they are required to learn at a faster rate.

Q7. What do you feel are the disadvantages of standard and advanced classes?

Teacher 1

There are social and educational disadvantages to splitting the classes. The standard students don't have the high expectations that advanced do. They view themselves as "only" standard. There is also a cultural division in the classes. This causes conflict or an "us against them" attitude between the two classes.

Teacher 2

Standard classes feel they are not equal to advanced classes. Although the classes move at different paces and may cover different subjects, they do not feel equal. Advanced students have a tendency to look down upon the standard students and there is a division. This division may carry over and affect other areas of life. There seems to be a stigma between standard and advanced, that I personally feel is inaccurate.

Teacher 3

The main disadvantage of standard and advanced class separation is that students in both levels, do not continue to foster tolerance, understanding and compassion for those students that can't perform at the same levels. Once all students are in the workforce, regardless of the profession, they will work with or work for people of varying aptitudes.

Another disadvantage is the disparity of classes offered. While we are working on solving that problem, standard students don't take a foreign language. It is more difficult to find room in an advanced schedule for technical school classes. It is also difficult to find room in schedules to place students that excel in one area in that one advanced class, while the rest of the classes may be standard.

Teacher 4

Standard classes start to feel that they are not as "good" as the advanced classes. They begin to feel that they are being left out.

Teacher 5

The only disadvantage to having standard and advanced classes would be the labeling and complacency that often comes with the separation.

Q8. What do you feel are the advantages of the mixed-ability academy structure?

Teacher 1

The main advantage of the mixed-ability academies is that all students operate with the same high standards. Standard students are partnered with advanced students who expose them to new ideas, higher order thinking processes, and the expectation of

success. Standard students feel more positive peer pressure to achieve in the academies. It also brings about a more unified attitude within the class.

Another advantage is that in the mixed ability academies, the Special Education students are divided equally among each class instead of all being placed in one class. This gives me more time to work individually with these students instead of being overwhelmed by all the needs of one class.

Teacher 2

I believe the advantage of mixed-ability classes is the feeling of equity. Everyone feels they are held to a higher standard. The standard students seem to work harder and the division between standard and advanced seems to dissolve. Advanced students are given opportunities to help standard students and feel a sense of accomplishment without feeling superior. Standard students feel a sense of acceptance and achievement by being successful in the same class as students who were formerly considered advanced.

Teacher 3

One advantage to mixed-ability academies is that the students learn to feel "responsibility" towards one another. They tend to help each other achieve high goals and encourage each other through rough spots and cheer each other through triumphs.

Another advantage of mixed ability classes is that the pressure over-achievers operate under seems to be a bit reduced. They are not as stressed. At the same time, the students that tend to ignore or forget deadlines and test dates pick up study habits.

Teacher 4

Students in the mixed ability classes seem to work together better than if they were divided into advanced and standard. The higher achieving student will encourage that fellow student who is struggling and try to show them a way to do it better. That student that struggles academically is given a mentor that is a good role model.

Teacher 5

The academy offers a mix of students with diverse learning styles. In this setting students might possibly learn from one another and be challenged by each other.

Q9. What do you feel are the disadvantages of the mixed-ability academy structure?

Teacher 1

The disadvantage of mixed-ability pairings is mainly the initial perception by parents and some students. Parents often object to placing his/her child with the “standard” students. They worry that their children will not be challenged by these classes. Although this is not true, it takes a while for this kind of thinking to diminish.

Teacher 2

I believe the mixed ability classes may leave behind your extremely high achieving students. Because the curriculum is geared more toward the masses, it could leave your students on each end of the spectrum behind, but I believe the higher achieving students may be most at a disadvantage. With an agreement with the students and teacher, this can be lessened by teaching that equal is not always the same and some students may be asked to do

more work or more in-depth work. The high achieving students can also benefit from peer teaching their classmates when possible.

Teacher 3

One disadvantage is, as … mentioned, parental misconception. Parents of advanced students may feel their child is not challenged; parents of standard students may worry their child will fall behind. Another disadvantage is on the educator's side. The amount of differentiation in the class may be overwhelming for a new teacher, or a teacher with little experience in mixed ability classes.

Teacher 4

One disadvantage is the initial parental fear that advanced students will not be challenged or the standard students will be asked to do more than their ability lets them.

Teacher 5

I have found that the academy style classroom tends to challenge the standard students while leaving the advanced students with a sense of complacency. Often times the advanced learners are often not performing to higher expectations and find themselves becoming bored and even discouraged.

Q10. Which structure do you think best serves the needs of the majority of students and why?

Teacher 1

I believe that the mixed ability structure is the most beneficial for the majority of my students. We found that achievement across the board increased with the implementation of the academies. Alabama Direct Assessment of Writing scores and Alabama High

School Graduation Exam results showed marked improvement. Standard students not only showed improvement academically, but also improved in disciplinary matters and attitude/motivation. Many more advanced students took on leadership roles throughout all the sections, not simply relying on the few who normally lead in the usual advanced class.

Teacher 2

I believe the mixed ability settings are most beneficial to the majority of students. I believe the lower achieving students especially benefit, and if anyone is left out, it would be the extremely high achieving students. It is more work for teachers, but these students can be challenged and have their needs met by giving them extra assignments or pairing them with a lower achieving student. This allows them to understand they material better because they are actually teaching it.

Teacher 3

Although I do not have much experience in the mixed ability academy setting, I have found that mixed ability classes are more beneficial. Students tend to be more compassionate to their classmates. They tend to cheer on and encourage students that may be a bit behind. Discipline tends to be better as the students learn more respect for each other and the class. Self-confidence increases as students' grades improve. More students participate in discussion and group work as that self-confidence grows.

Teacher 4

I believed the mixed ability setting serves the needs of the majority of our students. Students who normally do not perform at their best

are succeeding due to the encouragement of their peers. I have seen that as a result of this setting students are becoming and remaining friends with those that they are grouped with.

Teacher 5

I see both settings serving the needs of the students on different levels.

IV. Student and Teacher Outcomes

Q11. How do you think these two types of groupings affect student motivation?

Teacher 1

The mixed ability grouping increases motivation for all students, but I feel the greatest difference is for the standard students. In the Standard/Advanced split, the standard students do not have high expectations for themselves. They view themselves as “just standard” and do not strive to compete/compare with the advanced students. Sometimes teachers also fall into this mindset with the standard classes. In the mixed-ability academies, the standard students are more motivated to achieve higher standards because they are held accountable for them by their teachers AND by their peers. They do not want to appear incapable of doing what the rest of the class is doing, therefore the effort is greater. With greater effort, they experience success and want to continue to do so.

Teacher 2

I believe in the Academy structure all students are more motivated. I believe the lower achieving students experience success and realize they are not “dumb” or “slow” and begin to work harder to continue with their success. I believe standard students are less

likely to be motivated when they are grouped in Standard / Advanced groupings. They can get by with thinking they are not held to a high standard because they are only “standard”.

Teacher 3

Mixed ability classes seem to have more students that are motivated. Peers encourage each other. It also helps with the "I'm standard. I shouldn't have to do ...." attitude.

Teacher 4

Students in the mixed ability setting appear to be more motivated in regards to all aspects of their life. Since there is not the advanced or standard division, these students begin to not consider themselves as being better than others and look at each other as equal.

Teacher 5

The advanced setting tends to motivate the standard students to achieve at the level and expectations of the advanced students.

Q12. How do they affect student behavior?

Teacher 1

I think that behavior is better in the mixed-ability grouping. The students seem to conform to the higher standard of behavior in this grouping. They are often with students that are new to them and this somehow lessens disruptions. We are also able to place students in different sections who tend to misbehave when together.

Teacher 2

I believe student behavior is better than in Standard /Advanced groups because the students are sometimes around a new set of people and want to put the best foot forward. The students also may become friends with people they had not formerly been friends with. This increases the feeling of school spirit and pride. These friendships also lessen the tension between the Standard and Advanced groups when they are no longer in Academy classes.

Teacher 3

Behavior tends to be better. In my experience, in grouped classes, the behaviorally challenging students seemed to be lumped into one class. With the academies, they do not tend to be.

Teacher 4

Students in this setting seem to behave better because they are exposed to those who will behave better. Students who were group together in mixed academies are still friends with those students who were in their academies.

Teacher 5

The behavior in an academy classroom is controlled by the students more than the teacher. When you have a mix of behaviors, personalities and learning styles, students tend to correct and encourage each other.

Q13. How do they affect student achievement?

Teacher 1

We found that achievement across the board increased with the

implementation of the academies. Alabama Direct Assessment of Writing scores and Alabama High School Graduation Exam results showed marked improvement. Standard students not only showed improvement academically, but also improved in disciplinary matters and attitude/motivation.

Teacher 2

Our data has shown that more students pass the AHSGE in the 10th grade when mixed in Academy structure as well as higher scores in ADAW. I think students are more successful overall and also learn to communicate more effectively as well as being more tolerant. I would say overall achievement is much higher when speaking of academics as well as social skills.

Teacher 3

Achievement improves for all students. Standardized test scores improve. Classroom grades improve. Behavior improves.

Teacher 4

Since the implementation of the academies, more students have passed the Alabama High School Graduation exam and scored higher on ADAW. With students in academies there has been less disciplinary concerns and greater academic improvements

Teacher 5

Student achievement is affected in both a positive and negative way. Standard students are more challenged to reach a certain level of achievement, while the advanced students tend to become complacent and satisfied with a “standard’ level of achievement.

Q14. How have your beliefs, perceptions, and instructional methods changed as a direct result of your experiences teaching in mixed-ability academies?

Teacher 1

My beliefs and perceptions did not change very much. As a teacher of 10th grade students who ALL take the AHSGE, with no exceptionality, I felt all students must be pushed to attain the highest level of achievement possible. What did have to change were my methods. I had to focus on ways to reach the multitude of ability levels and learning styles in each classroom. I had to make my lessons more visual, active, and interactive. This required more time planning and implementing lessons. I had to gather resources that would more easily lend themselves to these new methods and I had to be willing to try things that were out of my comfort zone.

Teacher 2

My beliefs about what “standard” students were capable of increased dramatically. I also saw the students perceptions of themselves change. As they were successful, they wanted more and more to repeat that. Their desire for success motivated me to raise my level of instruction to help ensure that success. I believed if I taught it they should learn it. I realized that some students do not learn how I learn (and how I am most likely to teach) and as I began to explore new methods of instruction, I began to grow as a teacher. I also tried to repeat my successes. This led to a cycle that has been beneficial for my students as well as for me. I believe my perceptions and my students perceptions changed greatly, and for the better.

Teacher 3

My beliefs, perceptions and instructional methods did not change much. Mixed-ability academies matched what I believe much better than the standard/advanced class set-up. I believe that every child will rise to the expectations that are given to them and the academies held a high expectation for every child. Getting past the "I'm standard. Why do I have to do ...?" is not a problem in the academies.

The only real change I made, was to make sure that I provided more examples to all students than I would in a class with advanced only students. I also share more of my own writing, art and so on when sharing expectations of a given project or assignment.

Teacher 4

As a teacher of a 9th grade academy and a 11th grade advanced/standard setting, I have seen how the academy has helped even with those students are regrouped back into their advanced/standard classes. Students continue to achieve because they have seen in the academy what they can do. I have seen a trend in where I as a teacher I have tried to hold those standard students to higher expectations.

Teacher 5

Teaching in an academy classroom has encouraged me to find more ways to be challenging to certain students. It has also challenged my creativity. I see the success in test scores, however, I often wonder if it is beneficial to the long term results of students' success.

15. Do you have any other considerations for measuring the effectiveness or ineffectiveness of the mixed-ability academy structure?

Teacher 1

One factor that could be objectively measured is student drop-out rate for these classes. While in academy classes, I feel that student drop-out rate has decreased. Other issues could play a role in this factor, but I believe that the mixed-ability academies have improved student achievement, engagement, and motivation to the point that very few choose to drop out while enrolled in a mixed ability grouping.

An effective academy needs to allow the teachers involved to communicate, communicate, communicate!! This is the most helpful thing that our academy teachers do for each other and for our students. This classroom atmosphere is challenging and teachers need to spend time discussing successes, failures, possibilities, and problems. Our academy teachers are very close friends and we probably wouldn’t be as effective if that were not the case.

Teacher 2

I think you have to have teachers who are willing to fail and reflect. If the teachers are not willing to work closely together and share ideas and help one another, I do not think it will be as successful as it can be. I happen to work with my two best friends, and we became that way because of the academy classes, but I couldn't do it without them. We share ideas, data, strategies,and motivate each other. We can bounce ideas off each other and we are there just to listen. I am not sure our academy classes would

work as well as they do if we did not have that.

Teacher 3

Some other factors to consider:

1. The teaching team. In an academy setting, it is much more important that the teachers are truly a team. In the academy, teachers have to be able to work together. They have to instruct and facilitate learning. It is different than just teaching.

2. It is important that the students understand what is expected of them in the academy. It is a different learning environment than standard/advanced classes.

3. Along with this is the need for communication. Communication with the other faculty, the students, the parents, and the administration is important and necessary to keep academics, behavior and environment stable and challenging.

Teacher 4

No Additional Comments Provided

Teacher 5

Student and parent input should be considered when measuring the effectiveness of academy structure. Also, evaluating the capabilities and the personalities of the teachers willing or designated to teach in the academy structure should be considered.

APPENDIX F

FOLLOW-UP FOCUS MEETING TRANSCRIPT

Academy Teacher

Focus Group Discussion Summary

Research Question 3

Researcher: One of the things that didn't really come out in the reflective blog postings was the types of professional development, trainings, and other resources that have helped you prepare to teach mixed ability groups. So if you will, please talk to me for just a minute about this.

Teacher 3

One of the things that really helped me was the 20 hours of professional development training that I received through the regional in-service center on differentiated instruction.

Teacher 2

I went to a BER (Bureau of Educational Research) differentiation workshop.

Teacher 1

Now I have nothing to say (ha, ha).

Teacher 2

..and I think it was really beneficial.

Researcher: [Teacher 1], Did you go to the same workshop?

Teacher 1

Not the same workshop, but it was a BER workshop. It was specifically for social studies, and it was very beneficial.

Teacher 2

I think my AP (Advanced Placement Summer Institute) Training really helped a lot too.

Teacher 5

I was just about to say the same thing. That training gave me lots of new ideas for strategies and activities to do that have really been helpful.

Teacher 1

My AP Summer Institute was mostly just about writing.

Teacher 2

My AP lady gave us a whole notebook of strategies.

Teacher5

Yeah, that's how mine was.

Teacher2

That was wonderful, and I've used them in all of my classes. Some of them had to be tweaked, but it's been things that I never would have thought of.

Teacher 1

As far as resources go, the ones that I've used the most—and I've always gotten them through the Foundation grants—are the History Alive activities. It's kind of a package program, and I don't use the whole thing, but it's got tons of visuals and group activities and those types of things that it's hard to get hands-on things for history. History is harder, and I like those resources a lot.

Teacher 2

I use United Streaming a lot. Like not whole videos, but I'll use segments of videos a lot.

Researcher: Can any of the rest of you think of any professional development that has helped?

Teacher 2

The Science Academy with Pamela Harman (State Secondary Teacher of the Year)—that was a good one.

Teacher 4

And Science in Motion. They've been great for my stuff in chemistry and biology. They key toward all areas, and it's hands-on. They have a certain criteria—a certain set up that you use.

Researcher: Did you do AMSTI?

Teacher 4

No. I can't do AMSTI because of Science in Motion.

Teacher 2

If we had the money, I would love to have—I don't even know the name of it now, but we did a study on it when I was getting my Masters. It was inquiry-based, and it was the whole units are set up—there was a DNA one. I checked it out from UAB and used it that one year. It was awesome, and as far as inquiry goes, that's really difficult for me to do because I want to teach, and it's so well laid out.

Researcher: Marzano, how many of you did Marzano's Essential Nine—that kind of training?

Teacher 1

The book study?

Teacher 1, Teacher 2, and Teacher 5 raise hands

Researcher: Were the others of you not a part of that?

Teacher 4

I can't remember. Did we do it together?

Teacher 3

Yeah, I remember that now. We did it the last year I was here.

Teacher 4

I can't remember.

Researcher: Anything else under professional development?

Teacher 2

I think it would be beneficial to have more training. If you were going to do this, I think it would be beneficial to the teachers. Just because the more ideas I had the better I got at it; like the more resources I had, the better I got.

Researcher: O.K., I'm going to kind of skip to that question. One of the things that keeps coming up in the research about academies and small learning communities is that just re-grouping alone does not necessarily increase achievement. If you just take the kids and mix them up, that alone may not increase achievement, but we did see statistically significantly gains here when we started the academies, so what do you think are the factors besides the re-grouping—the things that you did in addition, or the things that you do now, in addition to re-grouping. How does the re-grouping allow you to do things that maybe you could not do when you just taught standard and advanced groups. What are the additional strategies, the additional ways that you motivate kids, the way that you check on kids, work together as a team—that kind of stuff. What are those things that are important to do if you really want to see gains—besides just changing the groups?

Teacher 2

Before we go to that answer, I would like to say that how you group the kids matters. I think our groups are not right this year, and I don't think we have them mixed evenly, and the difference from last year and this year is night and day. I have one class that is 17 advanced and a few standard and one that is all standard and 6 advanced, and it is night and day.

Researcher: So nobody took the time that we did initially to rank and hand-schedule the kids?

All teachers nod

Right.

Researcher: That's a problem. So people made decisions about where they wanted kids based on things other than achievement.

All teachers nod

Yes.

Teacher 5

We took the time, but then it did not happen.

Teacher 2

It didn't come out that way.

Teacher 1

They just used what happened last year is what I was told.

Teacher 5

There's parents that were complaining—that didn't want their kids in certain classes

Teacher 1

Yeah.

Teacher 5

And there were parents who were teachers.

Researcher: That's definitely an obstacle.

Teacher 2

And it is night and day (strongly emphasized), and I don't think the groups are that different. I can't wait to see the achievement scores because. I don't know.

Teacher 1

You know how we did it based on GPA the first years. Well, last year it was on it's way out. We had no say so, and there was a decrease in achievement.

Teacher 2

And we will see one this year. You can take that to the bank. Anyway, that wasn't your question, but I needed that out there because that bothers me a lot—even if you don't look at achievement, if you look at behavior, atmosphere, everything, and the kids know. Like we had a kid who was in advanced who was in the big standard group come and say, "I don't want to be in a class like that." It shouldn't be mixed where they would be able to know.

Teacher 1

Do you want an answer to your question now?

Researcher: Well, that's important—making sure that you get the grouping right. Then after that, what do you have to do? What does having them "academies" allow you to do that when you are in standard and advanced you can't or don't do?

Teacher 2 and Teacher 5 talk at the same time

Teacher 5

Go ahead.

Teacher 2

No, you go ahead.

Teacher 5

Waits

Teacher 2

I think motivation is easier because kids—especially for your lower achieving—they don't want to look "dumb" or standard, and I think that part kind of takes

care of itself when they are grouped correctly. I think that um…also I think that it helps with just the climate.

Teacher 1

It allows you to spend more time teaching rather than disciplining.

Teacher 3

And with all of that, we can work with the students better to facilitate learning and help students become more self-correcting because the get more curious, they want to learn more. At least that has been my experience

Teacher 5

Back to strategies, you are having to be more creative. That's what challenges me.

Teacher 2

I do think it's a lot more work.

Teacher 5

I find myself—that I would be more creative in the academy classroom room than in just the standard/advanced classes.

Teacher 2

And they're more receptive to new things, whereas if I try something with my standard seniors, they're like, "We're standard," and they don't feel like they need to go outside their comfort zone, and I think that that helps, but it is lots more work for teachers.

Teacher5

And teaching in groups works better. Of course, not this year because the groups aren't right, but I think that first year that I taught it was.

Teacher 1

You could actually get them together and match them up.

Teacher2

I think it makes you have to teach not just how you learn. Like I had to learn to teach to the different styles. Like I'm not at all creative and I had to be more willing to do the let them decide on their own how to present something, but it made me more aware, I've always been aware, it just made me more open to teaching in ways that I don't learn as well.

Researcher: Anybody else? O.K. the last question that I wanted to follow up on from your blog postings—and we've got different levels. One of you only taught in the academy for one year, others have two years, and some have four years. Some of you are doing it now, and some of you are not. So, I want you to think back all the way to before you ever taught in a mixed-ability academy—when you had only taught standard, advanced, or honors. Have your ideas about ability grouping changed any—your ideas about how kids should or should not be grouped. Have you seen any changes in your personal ideas about grouping in this whole process? Even think about your own schooling experiences.

Teacher 1

I grew up standard and advanced, but I like the mixed groups. It works for me. For me, it works very well, and the reason I was for it was because if you are teaching standard and advanced and they are all taking the graduation exam and you are not holding one group to the same standard as the other group, then it is very difficult, and I felt like it was just easier to push the standard students to a higher level. I like it just because of that.

Researcher: So would you say that your beliefs about how kids should be grouped changed after you saw the results?

Teacher 1

Sure. I wanted to keep the mixed groups. I did not want to go back to standard and advanced.

Researcher: How about the rest of you?

Teacher 5

I guess my ideas about standard and advanced changed because you have, well, the labeling, and we all look at the rolls, and I see students who maybe should be advanced in like English and history but struggle in math or science, so they're standard. I'm always asking kids, "Why are you not advanced?" They'll say because of math or something else. So, I guess, I've been able to see the student advance in their own area in stead of just being and "advanced" student if that makes sense.

Teacher 2

It makes perfect sense. I think students tend to live up to their labels too. I have seen that to be a difference that I have seen them carry with them even to the eleventh and twelfth grade and back to standard and advanced. I think that this year's group proves that the mixed-ability groups stuck with them. They don't…they seem to get along across the lines a lot better than when I first came here and notice that, and I think that looking at them from a twelfth grade standard and advanced, remembering them in tenth grade, uh, they seem to work harder, and I agree with [Teacher 5], I wonder why are they on standard? They shouldn't be on standard? And it may not have been my class but another class where that was an issue, and it made me re-think that, you know, that we may be really strong in one thing and not in another, and I like it, I guess, but then sometimes, I think it allows or it maybe—I worry if I'm going middle of the road instead of the higher standard because we have the lower group in there that I have to take the whole class to a lower level, and I try to remember to teach that fair doesn't mean the same—doesn't mean doing the same thing, but that's really

difficult for a sixteen-year-old to explain that you need to do an extra assignment because you're really good at this and they're not. To me that's not fair either. You know, that's just, so I worry, my concern is…I like how it holds everyone to a higher standard as far as they're all taking the same test and that way and the way they treat each other, and I worry academically if they are getting pushed as hard as they need to when you have AOD (Alabama Occupational Diploma), standard, and advanced all in the same class.

Teacher 4

But I've also seen in the eleventh grade, the ones that were grouped but now they've gone back, I've them pushing themselves to do just as well in my standard physical science because the grades are fairly high. That is still with them; it still sticks with them as far as their motivation to do better and make better grades.

Teacher 3

For me it goes back to what was said earlier. If they are not grouped evenly then it is a problem. If you have all of the academically challenged students in one class and the behaviorally challenged students in one class, then it's a challenge to get through the class. If they are grouped where the abilities are truly mixed, then it's not a problem, and I think, I mentioned the workshop I did this summer, that's helped me probably more than anything because not every assignment but some assignments, you can take it and say O.K. if you do this you get a C. If you do all of the C work plus this, then you can get a B. If you do everything for the C and for the B plus this, then you earn up to an A, so really those students who are challenged academically they can earn that A, the "advanced" but lazy if they want to stick with that C, then they can. It's ownership of their grade. It goes back to what was said before, if they are not grouped right, then it's a problem.

Researcher: That's great. So the stuff that we did this summer in the Layered Curriculum Workshop has been helpful?

Teacher 3

Yes, and that was also in another workshop that I did this summer too. It has helped.

Researcher: O.K. is there anything else that came out of the questions or anything that you discussed besides getting the grouping right that would be important recommendations for anybody else considering doing a ninth or tenth grade academy?

Teacher 2

I'll say that I think getting along is important.

Teacher 5

Yeah.

Teacher 3

Because we talk about it all the time about it, and I think that that helps me. Like it's behavioral, academics, standards, I think that it would be…I can't imagine doing it with people that I didn't being around because between every class at lunch and even if it's just something like "Are you having trouble with them?" I find that a kid may be going through a rough time everywhere and maybe it's not just me or finding it is a personality conflict or something…um, which that is a personal issue but it so much affects academics as well, so I think that if you don't have that—I would say they are my two best friends even outside of school, and if you don't have that, I can't imagine, I would imagine that it would be very difficult if it wasn't a team thing.

Researcher: I think you probably see that with [Teacher 4] because one of things when we first started was that we were all right here. I think proximity is important.

Teacher 2

I do too.

Researcher: I think the fact that you are so far down there that it's hard for you to be a part of the academy team. Do you see yourself as part of a team?

Teacher 4

Not really, to be honest.

Teacher 2

But ours is between classes and that kind of stuff, lunch schedules.

Teacher 4

It's more this year than last year as far as the ninth grade. I felt outside last year.

Teacher 5

I think too that there does need to be a section for the academy in the building. It need to be sectioned off in the school. Our academy classes need to be side-by-side.

Researcher: And that's what I mean. You need that proximity.

Teacher 1

Yeah, because we don't always stay after and talk about academy stuff. It's just between classes or when we have a minute. You need to have a way to communicate that doesn't take up a lot of time and planning

Teacher 2

I just think about the extra time. We have collaborative meetings, we have PLC meetings, we have C.A.V.E.S. (mentoring groups). It's just so much stuff and there's still only fifty minutes of planning, it can become overwhelming, and that's what I like if the classes are close by.

Teacher 5

It used to be that way at lunch, but they put us with our PLC, but we still don't talk, and they're still not right.

Teacher 2

Our adult time is important.

Researcher: Anything else?

Teacher 1

The only other thing that I can think of is that if someone is not committed to teaching—you know, you can't pull someone onto the academy team because it's convenient or because you need someone to fill that spot. It doesn't matter how you split those kids, if they are not committed to teaching and using the instructional time, differentiating instruction, and all of that stuff, then it's not going to matter, so I just think that there has to be careful selection—not only people that will communicate with each other and get along, but they need to be committed—which we all should be, but do you understand what I'm trying to say?

Researcher: Yes.

Teacher 1

Without being ugly. O.K. they need to be…

Teacher 2

It takes an extra step. You just can't say well they're advanced, they can read and figure it out because in academies that's not the case. It shouldn't be the case for a third of the class. By the time their in the twelfth grade if they're going to college, they know their GPA is important. In ninth grade and tenth grade, they may not realize that if you're not motivated.

Researcher: O.K. Thank you all so much.