COMMUNICATION ARTS GROWTH AMONG MIDDLE SCHOOL STUDENTS ENROLLED IN FOUR CURRICULUAR PATHS

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ABSTRACT

This quantitative, quasi-experimental study was conducted in a large, suburban district located southeast of Kansas City, Missouri, involved in a system-wide curricular reorganization aligned with detracking practices. The population included the cohort of students enrolled in sixth, seventh, and eighth grade between the school years 2006 – 2007 and 2008 – 2009. From this population, a sample of 1062 students were selected based on established criteria: students were enrolled consecutively during the time frame examined; students were enrolled in one of four identified curricular paths (representative of middle school curricular offerings); and all demographic and assessment data were available. The purpose of the study was to determine whether there was a difference in communication arts growth as measured by the Missouri Assessment Program (MAP) among groups of students enrolled in any of four curricular paths. The second purpose was to determine whether a difference in growth on the MAP was affected by ethnicity or gender. The dependent variable was communication arts growth while the independent variables were curricular path, ethnicity, and gender. The Communication Arts portion of the Missouri state assessment, MAP, was used to measure communication arts growth.

The analysis revealed a significant difference between some students enrolled in the traditional gifted communication arts course and some students enrolled in the standard grade level course between sixth and seventh grade, indicating some advanced students experienced more success in a traditionally tracked setting. Another significant difference occurred that same year between males and females enrolled in the traditional gifted course, as males grew more than their female peers did. This group of males also grew more than some males in the grade level course. Within the grade level course, one

group of males outperformed (according to growth means) another. Considering the curricular context of these findings, this data suggest that the traditional tracked structure again proved beneficial for some groups of students, specifically, males enrolled in the gifted curriculum and some males enrolled in the standard, grade level curriculum. The findings did not reveal any statistical differences between seventh and eighth grade, the year courses were re-organized to offer a more rigorous, challenging curriculum to a wider, more heterogeneous population.

Based on the findings of this study, future research might include a replication of the current study with an expanded, longitudinal sampling involving multiple cohorts from the district; a replication of the current study in comparable settings to see if findings are similar; the addition of qualitative methodology to more fully examine the paradigms, attitudes, and culture of the setting and their effect on programming changes; the inclusion of additional independent variables (such as growth in disciplines other than communication arts); and the inclusion of additional dependent variables (such as socioeconomic status).

DEDICATION

This dissertation is dedicated to the members of my loving family and to my closest friends who encouraged this endeavor, offered strength and reassurance during the darker days of the journey, made sacrifices in my honor, and applauded each small success—the same friends and family members anxiously awaiting the celebration at the finish line. This is *our* accomplishment!

This work is also dedicated to my children. I hope you will someday see that it was more than mere research that took time away from us. I hope you will come to recognize this body of work as a symbolic representation of the things I believe in most fervently and desire for you as you grow: a commitment to personal excellence, perseverance in the face of obstacle, a passion for learning, and the resolve to finish what you start.

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To the many friends and family members who have asked about my progress, endured explanations of my research, offered words of encouragement, and listened to me lament along the way: thank you. You may not have thought it was much, but your involvement and continued support offered the nourishment I needed when the road seemed impossibly long.

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TABLE OF CONTENTS

LIST OF TABLES

CHAPTER ONE

INTRODUCTION

The renowned 1983 publication, *A Nation at Risk*, set off yet another wave of government denunciation and reproach aimed at our country's public school system with its sharp criticism of education officials and school leaders based on American students' failure to compete on a global stage (National Commission on Excellence in Education, 1983). Since then, countless summits, agencies, consortiums, and councils have sought to offer follow-up evaluation and feedback, also focused on "fixing" American education. In 2001, the federal government reinforced its own method of assessing the effectiveness of our public education system with the reauthorization of the Elementary and Secondary Education Act. This comprehensive piece of legislation, the *No Child Left Behind* Act (NCLB)*,* was an accountability measure designed to expose under-performing schools via high stakes assessments (U.S. Department of Education, 2004). This legislative shift toward increased monitoring and supervision of America's schools simply added more credence to the chorus of voices already articulating a similar concern: our schools—and their students—have simply not performed at an acceptable, proficient level.

A variety of reported data support this claim. Bottoms and Murray (2003) reported in a Southern Regional Education Board (SREB) publication that only 22% of eighth graders in their network participated in six of eight literacy-based intensive experiences such as reading one hour outside of school each day, drafting short writing assignments weekly, making oral presentations, etc. (p. 2). The National Center for Educational Statistics (2011) has reported similar statistics: in 2002, 33% of students scored at a proficient or advanced level on the National Assessment of Educational

Progress (NAEP) reading assessment, and 27% scored as well on the NAEP writing assessment (foreword). A review of longitudinal NAEP data has indicated some improvement in reading scores of thirteen-year-olds; however, these most recent scores were only a five-point improvement over scores initially recorded in 1971, increasing from 255 to 260 (National Center for Education Statistics, 2011.). The absence of steady and significant gains in achievement has reinforced the call for change: too many middle-level students are not receiving the kind of learning experiences—especially in the area of literacy—necessary for success in high school and beyond.

For decades, educators have responded to students' diverse learning needs within a traditional organizational structure: tracking. Students requiring additional support or remediation are regularly grouped together in a homogenous setting designed to offer intensive reinforcement of basic skills not yet mastered (Rubin, 2006). Despite earnest intentions, this system has been criticized as inequitable and is held responsible for widening the achievement gap between high and low achievers, often along racial, ethnic, and economic lines (Gamoran, 2009).

One response to stagnating achievement gains and increased disparity amongst groups of students has been the elimination of low-level tracks. Low-level classes such as Business English have failed to provide students with critical skills needed in college and the workplace, instead offering a curricular dead-end (Gamoran, 2009). Reform agencies such as SREB (a nonpartisan, non-profit reform compact serving sixteen member states, including Missouri) have advocated for the elimination of remediation courses and suggest, instead, pairing challenging grade-level work with supplemental support courses. This organizational change, combined with a reinforced, more rigorous

college-preparatory curriculum, is a widely agreed upon answer to improving learning for all students, but especially for those deemed underachieving or low-performing (Bottoms & Murray, 2003).

<div align="center">Problem Statement</div>

In a 2009 study, SREB reported "middle grades students…are bored and disengaged in school, often losing interest and falling behind just as they should be preparing for the rigor of the high school curriculum" (p. 1). Furthermore, the report stated, "National studies and analyses of successful school practices show that the middle grades need a special focus to ensure that all students have the academic and career preparation they need for high school and beyond" (p. 2). One solution accepted by reform agencies such as SREB requires a partnership of increased academic rigor combined with a reduced number of tracks, a process loosely associated with "detracking" by some experts (Rubin, 2003). The basic premise involves raising expectations for *all* students while providing struggling learners with additional scaffolding and support as needed. A plethora of research exists on the adverse effects of tracking (Gamoran, Nystrand, Berends, & LePore, 1995; Kerckhoff, 1985; Kulik & Kulik, 1982); similarly, there is a selection of literature with alternative solutions to traditional tracking practices, chronicling a variety of detracking approaches (Allensworth, Nomi, Montgomery, & Lee, 2009; Brewer, Rees, & Argys, 1995; Burris & Garrity, 2008; Loveless, 2009). However, little research exists regarding opportunities for an increased number of students to take advanced coursework at the middle school level in communication arts.

Midwestern School District (MSD), a large, suburban district located southeast of Kansas City, Missouri, applied recommendations offered by SREB and other improvement agencies by evaluating the district's middle school coursework—its organization, depth, and relevance. The results of that evaluation, coupled with reform efforts already at work within MSD, led to a district-wide course reorganization that included the elimination of remedial middle school coursework and the creation of an Advanced Studies curriculum offering for seventh- and eighth-graders. This comprehensive shift in rigor reinstated appropriately challenging grade-level work for all students while providing additional opportunities for an increased number of interested students to experience more advanced coursework. The focus was increased student achievement and performance for all (Midwestern School District [MSD], 2011). Despite the intense focus on improving middle level student learning during the program's inception, no research has been conducted by the district regarding the effectiveness of this Advanced Studies curriculum in any of the four core areas.

Background and Conceptual Framework

According to the district webpage, MSD (2012a) emerged through the reorganization of seventeen small city and rural districts. In 1949, the district served only 1,200 students, but steady growth in the community pushed enrollment figures over 17,000 during the 2008 – 2009 school year. By 2012, MSD was comprised of three high schools, three middle schools, eighteen elementary schools, one alternative school, one technology academy, and one early childhood center (MSD, 2012a).

MSD's middle school student enrollment is presented in Table 1, organized by gender from 2006 – 2007 to 2008 – 2009 school years. Despite dramatic growth in

district enrollment during the early 2000s (MSD, 2012b), middle school enrollment showed a very slight increase from 2006 to 2009, adding only 30 students over three years. The ratio between males and females remained nearly constant, with a slightly greater female population than male.

Table 1

Midwestern School District Middle School Enrollment Data by Gender

		2006 – 2007	2007 – 2008	2008 -2009
Male	*N*	1,330	1,280	1,345
	%	49.9	48.5	49.9
Female	*N*	1,338	1,360	1,353
	%	50.1	51.5	50.1
Total Enrollment		2,668	2,640	2,698

Note. Adapted from September PowerSchool Enrollment Summary for Midwestern School District from 2006 - 2009. Retrieved on May 16, 2011.

A breakdown of middle school enrollment according to race is presented in Table 2. Overall, there has been a general increase in minority populations combined with a slight decrease in the White population from 2006 – 2007 to 2008 – 2009 school years. Black enrollment increased 3.2% from 11.2 to 14.4% while the Asian and Hispanic populations increased .6 and .4%, respectively. The White student population decreased by 78 students or 3.8%. Native American/Alaskan Native populations showed no positive or negative growth.

Table 2

Midwestern School District Middle School Enrollment Data by Race

		2006 – 2007	2007 – 2008	2008 -2009
Asian	*N*	46	52	62
	%	1.7	2.0	2.3
Black	*N*	299	326	388
	%	11.2	12.4	14.4
Hispanic	*N*	102	98	112
	%	3.8	3.7	4.2
Native Am/ Alaskan Native	*N*	14	12	13
	%	0.5	0.5	0.5
White	*N*	2,206	2,161	2,128
	%	82.7	81.9	78.9
Total Enrollment		2,668	2,639	2,698

Note. Adapted from September PowerSchool Enrollment Summary for Midwestern School District from 2006 – 2009. Retrieved on May 16, 2011.

MSD has demonstrated a strong commitment to individualization and high standards as evidenced by its mission statement: "We prepare each student for success in life" (MSD, 2012c). Various awards attest to the district's constant improvement efforts and its focus on achieving ever-ascending targets. The district received Missouri's Distinction in Performance Award, the highest form of academic recognition given by the state, for the tenth consecutive year in 2010 (MSD, 2012d). MSD students regularly score above the state average in all content areas, in all assessed grades on the Missouri Assessment Program, and the district's high school students are above the national

average on the ACT, averaging a composite score of 23.1 compared to the national average of 21.1 (MSD, 2012d). Additionally in 2010, MSD received its third Magna Award for "outstanding educational programs and community involvement," a national distinction granted by the *American School Board Journal* (MSD, 2012d).

Furthermore, to reinforce efforts to impact student achievement positively, several high schools within MSD affiliated in 2003 with High Schools that Work (HSTW), a reform platform developed by SREB (MSD Secondary Communication Arts Curriculum specialist, personal communication, March 20, 2011). While HSTW has offered several tenets outlining specific improvement actions, high schools in the district focused largely on increasing rigor and relevance in the classroom. One resulting action was the reorganization of courses offered in the communication arts department. Five leveled courses were consolidated into three, and the curriculum for each was built according to the rigorous guidelines set forth by SREB. All students were required to take the newly reinforced grade level course. Students unprepared for this more challenging work were also enrolled in a reading lab course to provide additional support, while students seeking more rigorous academic work were urged to take a new course: Advanced Studies. Designed to produce academic gains, this partnership of increased rigor with systemic support became the instructional banner at the high school level.

Since 2002, MSD's middle schools have been organized according to the traditional middle school concept as described by MacIver (1990): students are divided into small learning communities or "teams" who share a communication arts, math, science, and social science teacher; an elective "wheel" offers opportunity for student exploration of modern languages, practical arts, and fine arts; and an advisory/homeroom

program provides social/emotional support. All students are required to enroll in a grade level curriculum course (or modified version) aligned with state standards in the areas of social studies, communication arts, math, and science (MSD, 2007).

Given the success of course reorganization at the high school level and a newfound affiliation with Making Middle Grades Work (MMGW), the reform platform offered by SREB for the middle level, district leaders began exploring the vertical alignment of the new Advanced Studies program throughout the secondary level during the 2007 – 2008 school year. The existing accelerated programming at the middle level (exclusively offered to students identified as gifted) did not fit the district's new philosophy focused on increasing expectations for all students. The resulting reorganization, implemented the fall of 2008, expanded opportunities for more students in grades seven and eight to enroll in challenging core classes through a new Advanced Studies program (MSD Secondary Communication Arts Curriculum specialist, personal communication, March 20, 2011).

Prior to this reorganization, middle school students identified as gifted according to district criteria were offered an accelerated option for each core class (denoted as ACE, Acceleration Creativity and Enrichment). In the fall of 2008, all ACE courses were eliminated from the course catalog and replaced with Advanced Studies courses. All students deemed eligible—as determined by grades, Stanford Achievement Test scores, Scholastic Reading Inventory Lexiles, and teacher recommendation—were encouraged to enroll in Advanced Studies core classes (MSD, 2011).

Table 3 presents the curricular offerings available to the cohort of students affected by this program change in between the seventh and eighth grade years of their

middle school experience. Given that all students experienced the grade level curriculum while in elementary school, each group received a similar educational experience during sixth grade. Group 1 includes those students who continued to enroll in the grade level communication arts course in seventh and eighth grades. Group 2 includes students enrolled in the grade level communication arts course until they progressed into the Advanced Studies course during eighth grade based on district determined eligibility guidelines. Group 3 consists of students enrolled in the gifted communication arts course (ACE) in seventh grade who maintained rigorous coursework via Advanced Studies in eighth grade when the ACE course was discontinued. Group 4 is comprised of students enrolled in the gifted communication arts course in seventh grade, who, either by choice or scheduling necessity, enrolled in the grade level course during eighth grade.

Table 3

Midwestern School District Core Curricular Paths

	Sixth Grade 2006 – 2007	Seventh Grade 2007 – 2008	Eighth Grade 2008 – 2009
Group 1	Grade Level	Grade Level	Grade Level
Group 2	Grade Level	Grade Level	Advanced Studies
Group 3	Grade Level	ACE (Gifted)	Advanced Studies
Group 4	Grade Level	ACE (Gifted)	Grade Level

Note. Midwestern School District (2008). *Secondary program of study 2008 – 2009.* Midwestern suburb: Author.

These four curricular paths represent the kinds of coursework available to students during the dismantling of the middle school's more traditional program (which included three levels of language arts courses where enrollment eligibility was determined by student

ability both perceived and documented) in favor of expanded academic opportunities for a wider population of students.

Significance

As mandated by the federal government's *No Child Left Behind* Act, 100% of students across the country must demonstrate proficiency in reading and mathematics as evidenced by state assessments by the spring of 2014 (U.S. Department of Education, 2004). In order to achieve this demanding criterion, school districts must implement and refine programs designed to increase student learning at all levels. The Advanced Studies program implemented at the middle school level in MSD provides a challenging core curriculum to an expanded group of students with the very objective being increased achievement for increased numbers of students. Since research related to this specific form of detracking appears limited, findings from this study will add to the existing body of knowledge related to these forms of organizational and curricular changes and their impact on communication arts achievement at the middle level. Since no research has been conducted in MSD regarding the effect on communication arts growth of enrollment in various curricular paths, findings from this study may inform decisions concerning the future maintenance, revision, and/or elimination of the Advanced Studies program.

Purpose Statement

The purpose of this study was to determine whether there is a difference in communication arts growth as measured by the Missouri Assessment Program (MAP) among groups of students enrolled in any of four curricular paths in MSD (see Table 3). The second purpose was to determine whether a difference in growth on the MAP is affected by ethnicity or gender.

Delimitations

Delimitations are defined as those factors controlled by the researcher (Roberts, 2004). In this study, those factors included location, tools used to measure student achievement, duration of the study, and sample size and composition.

1. This study was conducted in a large, midwestern suburban school district.

2. Student growth in communication arts was indicated by the scale score on the Communication Arts portion of the MAP.

3. The sample included one cohort of students as they progressed through sixth, seventh, and eighth grades in MSD between the school years 2006 – 2007 through 2008 – 2009. Three years' worth of student achievement data was collected during this period.

Assumptions

Assumptions are identified as statements related to the study presumed to be true (Roberts, 2004). The design of this study was based upon the following shared understandings, or assumptions:

1. The Communication Arts section of the MAP is a reliable and valid measurement of student achievement in communication arts.

2. Students gave their best effort on the Communication Arts portion of the MAP.

3. Student data were accurately coded and correctly entered into Excel and uploaded into IBM® SPSS® Faculty Pack 21 for Windows.

4. All communication arts teachers were adequately trained to follow each course curriculum.

5. All communication arts teachers were equally effective in areas of communication, curriculum implementation, and classroom management.

Research Questions

According to Lunenburg and Irby (2008), research questions serve as the compass of the study as they "identify questions that have not been addressed previously or remain unanswered in the literature" (p. 126). The following research questions provided direction for this study:

1. To what extent is there a difference in communication arts growth as measured by a difference between the sixth and seventh grade scale score on the Communication Arts portion of the MAP among groups of students enrolled in one of four curricular paths?

2. To what extent is there a difference in communication arts growth as measured by a difference between the seventh and eighth grade scale score on the Communication Arts portion of the MAP among groups of students enrolled in one of four curricular paths?

3. To what extent is there a difference in communication arts growth as measured by a difference between the sixth and eighth grade scale score on the Communication Arts portion of the MAP among groups of students enrolled in one of four curricular paths?

4. Is the difference in communication arts growth as measured by the MAP scale score affected by ethnicity among students enrolled in one of four curricular paths?

5. Is the difference in communication arts growth as measured by the MAP scale score affected by gender among students enrolled in one of four curricular paths?

<div align="center">Definition of Terms</div>

According to Roberts (2004), "terms used that do not have a commonly known meaning or terms that have the possibility of being misunderstood" (p. 129) should be operationally defined by the researcher. For the sake of clarity and precision, terms relevant to this study are defined as follows.

Acceleration Creativity and Enrichment (ACE). Students qualifying for gifted coursework at the middle school level in MSD were afforded the opportunity to enroll in ACE social studies, language arts, science, and/or math courses. This accelerated curriculum was offered through the 2007-2008 school year (MSD, 2007). This study was only concerned with students enrolled in the ACE language arts course.

Advanced Studies. This is the name given to accelerated core classes implemented the fall of 2008 at each middle school in MSD (see Appendix E). According to district reports, these courses were developed to provide continued support to gifted students while expanding opportunities for additional students who desired more challenging coursework. The Advanced Studies curriculum was a revised version of the previous ACE curriculum (MSD, 2011).

Curricular Path. For the purposes of this study, this term describes various combinations of communication arts course progression. While all students were offered the grade level communication arts curriculum in sixth grade, middle school offered a choice of two courses in seventh grade and two different courses in eighth grade. The

courses chosen during these seventh and eighth grade years by any student included in the study is referred to as a curricular path (see Table 3).

Detracking. According to Rubin (2006), "detracking generally entails an attempt to group students heterogeneously as a means of ensuring that all students, regardless of their race or class background or their academic ability, have access to high-quality curriculum, teachers, and material resources" (p. 6).

Missouri Assessment Program (MAP). This annually administered state assessment measures student mastery in grades 3-8 in the areas of mathematics, communication arts, and science (administered in grades 5 and 8 only). The assessment is based on the Missouri Show-Me Standards and Grade Level Expectations, measuring specifically defined skills in each content area for each grade level. The test also includes a portion from the *TerraNova*, a nationally norm-referenced tool that provides insight into Missouri students' progress in relation to their peers throughout the U.S. (Missouri Department of Elementary and Secondary Education [DESE], 2011). For the purposes of this study, only the communication arts assessment administered in grades 6, 7, and 8 was considered relevant.

Scale Score. One unit of measurement derived from the MAP is the scale score, a number ranging from 450 to 895 that indicates points earned based on correct student responses. This number is used to determine a student's achievement level (Missouri DESE, 2009a, p.4).

Tracking (also referred to as *Ability Grouping*). As defined by Jones, Spade, and Vanfossen (1987), tracking "is the grouping of students into course sequences and classrooms on the basis of personal qualities, performances, or aspirations" (p. 104).

Overview of Methodology

Although a detailed explanation of the methodology is provided in chapter three, this section provides a cursory overview. This study employed a quantitative quasi-experimental research design that examined the dependent variable of communication arts growth as impacted by the independent variables of curricular path, gender, and ethnicity. The population included MSD students enrolled in sixth grade during 2006 – 2007, seventh grade during 2007 – 2008, and eighth grade during 2008 – 2009. Purposive sampling procedures produced a sample of 1,062 students who attended sixth through eighth grades during the years previously mentioned, who followed one of four identified curricular paths, and whose assessment and demographic data was both complete and accessible. The Communication Arts portion of the MAP was used to measure communication arts growth. Archived data sets were compiled into a Microsoft Excel workbook by a district computer technologist, uploaded into IBM® SPSS® Faculty Pack 21 for Windows, and analyzed using analysis of variance (ANOVA).

Organization of the Study

Chapter one offered essential background information, a statement of the problem including significance of the study, limitations, assumptions, five research questions guiding this study, definition of relevant terms, and an overview of the methodology. The remainder of this study is organized into four chapters. Chapter two provides a historical examination of the tracking movement, including its effect on student achievement, and then follows the shift toward system-wide detracking with an analysis of its impact on student learning. A detailed discussion of the methodology, which includes an explanation of the research design, sampling, instrumentation, study

limitations, and procedures for statistical analysis, is included in chapter three. Chapter four provides a description of data analysis and a presentation of the findings, and chapter five outlines the findings, shares conclusions, and offers suggestions for future research.

CHAPTER TWO

REVIEW OF LITERATURE

This chapter presents a comprehensive review of literature related to both the tracking and detracking movements and the effectiveness of each related to student achievement. The first section narrates the historical development of tracking practices in American education as it progressed through the twentieth century. The effects of such tracking practices, especially as they pertained to ability, gender, and minority groups, are presented in the second section. This section is followed by a discussion of the various societal, cultural, and educational shifts responsible for ushering in a counter-movement, detracking. Section four outlines the detracking movement, and section five recounts several studies that investigated the effects of this practice on ability, gender, and minority groups.

Historical Development of Ability Grouping as an Educational Practice

Early ability-grouping practices began at the turn of the twentieth century when public education became readily accessible to the masses—including children of immigrants and working-class families—rather than exclusively available to the sons and daughters of America's socially and economically elite (Burris & Garrity, 2008, p. 53). As Chapman (1988) noted, the period between 1890 and 1917 marked a prolific increase in immigration causing the country's population to swell to more than 100 million residents from a mere 63 million (p. 41). During the first decade alone, almost nine million immigrants entered the U.S. from countries such as Austria-Hungary, Italy, Russia, Greece, Romania, and Turkey. This massive influx of new citizens drove public school enrollment up by as much as 50% in some areas of the country, creating

considerable obstacles for schools regarding attendance, size, and cost. These challenges were further compounded by America's Industrial Revolution, as philanthropists, reformers, and organized labor leaders pushed for increased child labor laws partnered with more stringent compulsory education laws. It was during this time that school years became longer, school days were extended, and the public high school was created. These changes were greeted with great anxiety and consternation by those in education, as evidenced by comments made by the dean of the Stanford School of Education, Ellwood P. Cubberley (1919):

> One of the results of all this legislation has been to throw, during the past quarter of a century, an entirely new burden on the schools. These laws have brought into the schools not only the truant and the incorrigible, who under former conditions either left early or were expelled, but also many children of the foreign-born who have no aptitude for book learning, and many children of inferior mental qualities who do not profit by ordinary classroom procedure. (p. 381)

New York City and its public education system were perhaps most affected by these immigration and legislative changes (Chapman, 1988, p. 43). Between 1890 and 1910, the city's population more than doubled, from 2.3 million to 4.8 million. During the years of heaviest immigration, over 75% of New Yorkers were first- or second-generation immigrants, and only 20% of the population was the product of white, native parentage. This immigration influx, combined with the Compulsory Education Law in 1903 (and legitimate efforts to enforce it), contributed to a 57% increase in school enrollment in New York's public schools between 1900 and 1910. The city responded

with a massive building program, but this did not relieve overcrowding: by 1914, three elementary schools and two high schools reported student enrollment of over 4,000.

According to Chapman (1988), enrollment growth, building challenges, and increased cost were not the only problems encountered by the district. Academic performance and progress were also lacking as many children struggled to keep pace with the established curriculum, failing to make their way through the public education system in a "uniform and systematic fashion" (Chapman, 1988, p. 44). In 1904, the Superintendent of New York's schools published reports claiming retardation—defined as being "overage for [one's] grade level"—as a central cause (p. 44). The Russell Sage Foundation appointed Leonard P. Ayres, former superintendent of Puerto Rico schools, to investigate this retardation problem on a national scale.

In 1909, Ayres responded with a report, *Laggards in our Schools*, which outlined his findings. Based on the investigation of more than 20,000 student records representing 15 Manhattan schools and various school reports published by cities across the nation, Ayres reaffirmed retardation as the central cause of academic failure, deeming nearly one-third of the student population as "retarded" (Chapman, 1988, p. 44). He cited variations across geographic location (a 7% retardation rate in Medford, Massachusetts compared to almost 75% in Memphis, Tennessee), ethnicity (16% of Germans were found to be retarded whereas 36% of Italians were identified as such), and gender (girls were more likely to successfully manage elementary school as compared to their male counterparts) (Chapman, 1988, p. 44). A host of factors, including late entrance, irregular attendance, illness and physical defects, geographic mobility, and simple ethnic or gender differences was offered as possible causes. Fixing this problem, claimed

Ayres, would require improved compulsory education laws emphasizing education over employment and school reforms including special classes for struggling students, more accommodating grading practices, and a curriculum better suited for the average student (p. 45). Ayres (1909) concluded "If our conception of the mission of the common school is true then the schools must be in some measure reformed, not only on the administrative side, but also through changes in the course of study and in the methods of study" (p. 218).

While this publication further impelled education reform, the call to accommodate student differences was not an entirely new appeal (Chapman, 1988, p. 46). Changing demographics had spurred the creation of several "plans" during the last quarter of the nineteenth century (the Batavia Plan, the Pueblo Plan, the Chicago Plan) that incorporated a variety of modifications such as flexible grading, varied pace of instruction, the use of teaching assistants, or small group instruction (p. 50). One early plan, developed and refined by Van Sickle in the Baltimore Public School system, became an early blueprint for the contemporary three-track system. Designed in response to both "average" and "gifted" students, children were steered into one of three paths, "minimum essentials," "average," or "superior," during their first six grades. The newly created intermediate school then offered differentiated curricula specifically conceived to match the abilities of each group. Both the "minimum essentials" and "average" groups were enrolled in business-oriented, "household arts," and/or vocational courses while students in the "superior" group were challenged with advanced academic work (p. 51).

Nonetheless, Chapman (1988) pointed out, the recognized need for massive reorganization did not fully emerge until the first quarter of the twentieth century when

philosophies regarding the purpose of public education began to shift. During the nineteenth century, the goal was minimum education for the masses with promotion to high school and college reserved for the elite; by WWI, however, the philosophy had changed, recognizing public education as a universal need for all (p. 46). In 1918, the Commission on the Reorganization of Secondary Education noted that: "within the past few decades changes have taken place in American life profoundly affecting the activities of the individual" (p. 7) and so adopted seven "cardinal principles" of education – health, command of fundamental processes, worthy home-membership, vocation, citizenship, worthy use of leisure, and ethical character (p. 11). The ideas set forth by this commission suggested that early attempts to differentiate and reorganize the high school institution, while a necessary and well-intended initiation, simply were no longer adequate in meeting the needs of the high school student (Chapman, 1988, p. 55). Schools were quickly changing to meet the ever-shifting demographics of twentieth-century America and to respond to a new philosophy regarding the role of education. Ability grouping offered a viable solution to the challenges faced by educators at this time (Kulik & Kulik, 1982, p. 619).

A Shift in Tracking Practices

Ability grouping, or tracking as it has become widely known, was quickly institutionalized during the early twentieth century due to many educators' beliefs in its instructional and managerial advantages. Homogenous grouping, the essential aim of tracking, allowed instructors to focus on very specialized learning needs of certain populations while simplifying the business of managing a classroom (Jones, Spade, & Vanfossen, 1987). These practical advantages, combined with many teachers' inherent

prejudices regarding low-achieving students (Burris & Garrity, 2008, p. 54), made

tracking an appealing and seemingly effective reform—especially considering the many

changes to America's societal landscape during the first half of the twentieth century.

According to Lucas (1999), American schools were regularly organized around a

relatively rigid tracking system, dividing students into "explicit mutually exclusive

groups" until the mid 1960s. It was during this time that curriculum differentiation began

to replace the long-favored organizational scheme of systemic tracks (p. 134). Instead of

sorting students into college preparatory, general education, or vocational/technical paths,

students were placed in different levels of the same course or to a different curriculum

designed as more or less challenging (Burris & Garrity, 2008, p. 16). This structural

change was, in part, the product of a shift in social philosophy regarding various

institutions' prejudicial practices brought to light during the civil rights movement of the

1950s and 60s (Moore & Davenport, 1988). In the case of *Hobson v. Hansen (1967)*, a

federal district court judge ordered District of Columbia school officials to eliminate a

school-wide tracking system (Hudgins, 1973). While track assignment was determined

based on scores earned on ability/aptitude tests, the plaintiffs claimed that the

assessments used to produce these scores were inherently discriminatory. Furthermore,

they claimed the absence of track mobility (the likelihood of children assigned to a low-

level track moving to a more advanced track) further divided students due to the (poor)

quality of the curriculum and instruction provided to lower-achieving students. The

judge did not preclude districts from offering "different types of education to different

kinds of students" (essentially, curriculum differentiation) but did condemn systemic

tracking practices that resulted in more segregation of students (p. 14).

In 1988, Moore and Davenport analyzed curricular placement in several major metropolitan school districts including New York, Chicago, Philadelphia, and Boston. Prior to the mid-1960s, most of these districts were organized around a very traditional tracking system consisting of honors, regular, essential, and basic programs; students were assigned to a particular track, and the assigned track determined their educational outcome. However, by 1975 procedures for assigning formal track placement had been eliminated. Similar sorting and selecting processes still remained, though now in the form of curricular/course tracking. Instead of using program tracks, these districts instead attached similar labels ("honors," "regular," and "basic") to individual courses. Despite the appearance of dismantling systemic tracking, the practice of classifying students into established homogenous settings had not been entirely discontinued. The organizational structure had simply evolved from rigid, system-wide tracking to "differentiated curriculum" or course-by-course ability grouping.

In his study of the period after systemic tracking was widely abandoned—what he calls the "Unremarked Revolution" due to the lack of research regarding the effects of moving from traditional tracking to differentiated coursework—Lucas (1999) found that an even "more hidden in-school stratification system" had remained (p. 131). He noted that any system designed to separate and divide students into groups "within which norms differ systematically" can create a form of *de facto* tracking that may have "institutional effects" (p. 15)

Understanding Contemporary Tracking Practices

Despite its widespread adoption and generic title, the actual practice of tracking students has taken on many forms. According to Burris & Garrity (2008), some

educational systems' "ability groups" have been determined by achievement or aptitude

tests taken as early as kindergarten; in other cases, formal tracks have become the product

of a "meritocracy" resulting from teacher recommendations, grades, and student

motivation. In still other learning organizations, students have been allowed to access

and remain in a certain track on the basis of meeting established academic conditions

(e.g., must earn an 80% or better to remain in the accelerated course) (p. 17). Leveling

systems, often used synonymously with tracking, provide the same curriculum for all

students though enrollment may take place in different grades (e.g., high achieving eighth

graders may take the same course as struggling tenth graders) or for a different duration

of time (e.g., a quarter versus semester course) (p. 17). Regardless of the specifics of

implementation, a formalized system that offers multiple educational paths for multiple

groups of students based on their perceived qualifications has been, and can be, defined

as tracking.

Though the application and popularity of the traditional tracking structure began

to decline during the second half of the twentieth century, a variety of studies have

revealed some form of tracking (when considering the range of definitions, as described

above) still in existence in many of America's schools as late as the 1990s. Epstein and

MacIver (1990) used data from the Johns Hopkins Center for Research on Elementary

and Middle Schools survey that included a sample of 1,753 principals. Responses

indicated that some manner of "between class grouping" was used in more than 40% of

schools surveyed; over 20% of principals admitted that *all* course assignments were

based solely on perceived student ability. The same study found the prevalence of

whole-class ability grouping increasing each year from fifth to ninth grade with English

and math being the courses most commonly organized by ability level. In a survey conducted by the National Association of Secondary School Principals in 1993, 82% of school leaders who responded reported some form of ability grouping used in their building (Valentine, Clark, Irvin, Keefe, & Melton, 1993).

<div align="center">Effects of Tracking on Student Learning</div>

Gamoran and Mare (1989) suggested two criteria by which tracking may be evaluated for its effect on academic achievement: productivity and inequality. Productivity, according to these authors, indicates students' overall level of achievement or educational outcome (e.g., graduation rates) while inequality speaks to the distribution of academic success across various tracks or groups. Ten years later, Gamoran (2009) surmised: "Although not all studies have reached the same conclusions about these outcomes, the weight of the evidence indicates that tracking tends to exacerbate inequality with little or no contribution to overall productivity" (p. 4).

Curricular Path and Achievement

Studies investigating the effects of tracking on achievement have primarily used one of two methods to determine students' track placement: self-reporting by students, offering a social-psychological dimension capturing student perception but not necessarily an accurate representation of track location, and transcript/course analysis, which has provided a more *structural* measure of students' track assignment (Gamoran, 2009). Regardless of the method of measurement, says Gamoran (1999), a vast majority of studies (Gamoran, Nystrand, Berends, & LePore, 1995; Kerckhoff, 1985; Kulik & Kulik, 1982) have found little impact on achievement across all groups (productivity) accompanied by increasing gaps between high and low-achieving groups (inequality).

In 1982, Kulik and Kulik conducted a meta-analysis using 51 comparative studies of secondary level tracking practices. Their primary purpose was to evaluate the effects of grouping on learning, student attitudes, and student self-concept; their secondary aim was to conduct an "analysis of analyses" using "statistical methods to relate study features to study outcomes" (p. 619). Essentially, their research goal was to make broader observations about the effects of ability grouping based on a more comprehensive pool of data/findings. Because these studies differed in many ways (grouping method, research design, course setting, and publication history), categorization variables were created to establish a classification system, and an index of effect size was used to quantify effects in the area of achievement, attitudes, and self-concept. In 70% of the studies describing the effects of grouping on achievement as measured by some form of assessment, students from grouped settings scored slightly higher than those in heterogeneous classes (the equivalent of moving from the 50th to the 54th percentile). Effects were much more substantial in programs designed for "gifted" learners (an effect size of 40) and were almost zero in the four programs designed for "academically deficient" learners (p. 620). Due to the relatively small effect size, Kulik and Kulik concluded that ability grouping had very little impact on student achievement except in those academic classes created for high ability students, creating an increasing achievement gap between high achievers and their peers.

American researcher Kerckhoff (1985) analyzed tracking practices in the United Kingdom to detect achievement differences amongst students organized into various ability groups as determined by school or level (across and within settings). Kerckhoff used data collected during the National Child Development Study, which followed the

educational progress of 9,399 children born the week of March 3-9, 1958, in England, Scotland, or Wales. This cohort of children was assessed at ages 7, 11, and 16 in the areas of reading comprehension and mathematics; however, most of the regression analyses focused primarily on the data collected at ages 11 and 16. Almost all students included in the sample attended one of four types of schools: grammar (designed as a college preparatory program for those of high ability), secondary modern (intended for students not selected for technical or grammar school placement), comprehensive (a new form of school gaining popularity in the 1970s that enrolled a heterogeneous blend of students), and private schools. The study differentiated not only amongst the four types of secondary schools but examined groupings (up to seven) within each school. Standardized assessments were administered in each setting to gather comparative achievement data, and data were controlled for a variety of influencing factors. Kerckhoff found no gains in academic achievement consistent across groups of students resulting from selecting and sorting students based on perceived ability levels (as compared to mixed-ability settings). In fact, gaps between high and low-achievers increased over time: "the losses by low ability students, combined with the gains by high ability students, make the overall effect of ability grouping very striking" (Kerckhoff, 1985, p. 23). When compared with similar students in untracked settings, students in higher-level courses scored higher and students in low-ability classes scored lower—evidence of a system institutionalizing inequality with little productivity.

In 1990, Slavin attempted to synthesize sixty years' worth of research on the effects of ability grouping in secondary schools. As is consistent with a "best-evidence synthesis" approach, clear and rigorous standards for inclusion in the meta-analytic study

were established. The resulting 29 studies shared similar characteristics: system-wide

tracking practices had been in place for at least one semester at the time of the study; at

least three ability-grouped classes were compared with at least three heterogeneously-

grouped classes; standardized achievement data were used to determine outcomes;

comparability of samples was supported by way of random assignment or matching of

students and/or classes; and the study was printed in English. As is also consistent with

"best-evidence synthesis" methodology, effect sizes were computed to represent study

outcomes. Of the 29 studies reviewed, effect sizes were established for 15 studies for

student groups deemed high-achieving, average-achieving, and low-achieving, and the

median (rather than the mean) was used to eliminate outliers. The effect size was +.01

for high achievers, -.08 for average achievers, and -.02 for low achievers. When

combined with the remaining 14 studies (each counted as having a .00 effect size), the

median effect size for each level of student across all 29 studies was .00. Regardless of

variations between and amongst studies (e.g., grade level studied, method for determining

track assignment, number of leveled groups, geographic location of the population, or the

year the study was conducted), no statistical differences in effect size were found. Slavin

concluded that contrary to some studies and a prevailing 'common sense,' ability

grouping, in fact, has very little impact on productivity or inequality. Slavin (1990)

argued, "The lesson to be drawn from research on ability grouping may be that, unless

teaching methods are systematically changed, school organization has little impact on

student achievement" (p. 491).

 While Slavin's findings stand in opposition to much of the research, his

summations regarding the quality and methodology of instruction and its effect on

student learning have been supported by others in the field: "it appears that instructional variation across tracks and groups at different levels is the more prominent reason for…achievement gaps between tracks" (Gamoran, 2009, p. 8). Gamoran further explained:

> students in high tracks encounter more challenging curricula, move at a faster pace, and are taught by more experienced teachers with better reputations, while students in low tracks encounter more fragmented, worksheet-oriented, and slower-paced instruction provided by teachers with less experience or clout. (p. 8)

In a 1995 study of the effects of grouping on literature achievement, Gamoran et al. endeavored to determine just that: if, indeed, inequitable distribution of achievement across tracks is associated with the quality of instruction provided. The study population included students from 92 honors, regular, and remedial eighth and ninth grade English courses. Students were given a literature assessment based on five readings from their respective course; while the readings varied, the questions were standard and ranged from recall to synthesis. Each test was scored by two evaluators, their average representing the final assigned score. These scores were then used to examine the relationship between achievement and levels/types of engagement previously observed in various classrooms. Researchers used regression analyses to measure the effects of procedural engagement (e.g., completion of assignments, time spent on homework, classroom misbehavior, etc.) and substantive engagement (i.e., how deeply instructors engage students in meaningful and authentic meaning making) controlling for gender, ethnicity, socioeconomic status, and prior reading and writing skills. Students who were procedurally engaged scored higher on the assessment, and some elements of substantive engagement such as uptake

(using student responses as the basis for subsequent questions thereby probing deeper based on students' own thinking), contiguity (making connections between various elements of the curriculum), authenticity (questioning strategies that solicit original responses), and high-level evaluation (recognizing students as primary sources of meaning by integrating their responses into course content) were linked to higher achievement as well. When analyzing this relationship across groups, Gamoran et al. (1995) found that differences in procedural and substantive engagement accounted for approximately half of the low group's achievement deficit and roughly one quarter of the high group's advantage suggesting that level of engagement (a by-product of the quality of instruction) does, in fact, differ across levels and contributes to achievement gaps amongst groups of students.

Curricular Path, Gender, and Achievement

Studies examining the effect of track placement on achievement by gender have been relatively limited, especially in the discipline of English/communication arts. Perhaps due to the small body of work in this area, no resounding theme has been apparent. What is evident, however, is the clear absence of findings indicating significant achievement differences between genders in tracked settings. At least in the field of mathematics, very little—if any—achievement variance has been found, as demonstrated by Hallinan and Sørensen (1987). In this study, researchers examined the effects of ability grouping on mathematics achievement with a specific focus on gender differences. The population included more than 1400 ethnically diverse students from 48 fourth, fifth, sixth, seventh, and combined classrooms representing 10 public and private California schools. All students were given the California Achievement Test, the Iowa Test of

Basic Skills, and the Metropolitan Achievement Test. Grade-equivalent scores, rather than raw scores, were used for the sake of comparability across schools. Also recorded were teacher-reported grouping practices (which included the confirmation of instructional grouping, processes for determining group assignment, the levels represented, and the demographic make-up of each group). Demographic information (i.e., race and gender) derived from school records was also included in the data set. In this study, 19 classes used ability grouping for mathematics instruction whereas 29 did not. After conducting four sets of multivariate analyses, researchers found an effect size of "virtually zero" for mathematics achievement of both boys and girls in an ability-grouped classroom, indicating that class organization (grouped or ungrouped) does not have a "differential effect" by gender. The authors concluded, "If these results are generalizable, then sex considerations in the assignment process do not affect mathematics achievement and, consequently, fail to explain observable differences in mathematics achievement of males and females" (p. 71).

Curricular Path, Ethnicity, and Achievement

The 1975 reading achievement data of thirteen-year-olds disaggregated by race and collected by way of the National Assessment of Educational Progress (NAEP) reveals a 36-point gap between the average scale score of white and black students (National Center for Educational Statistics, 2012). That gap narrowed to 18 in 1988 before expanding back to 32 in 1996 and then closing slightly in 2008 to 21 points. A similar gap exists between white and Hispanic students with less variance over the thirty-three year history. A difference of 30 points existed between the two groups in 1975 and only narrowed to 26 points by 2008 (National Center for Educational Statistics, 2012).

According to this data, White students have consistently outperformed some minority groups. The question central to this disparity discussion remains: has this been the result of tracking?

According to Lucas (2009), minority students who share similar achievement and socioeconomic demographics with their white peers are just as likely to enroll in high-level courses or tracks. No less, these variables do impact student achievement via track placement: "…because minority students tend to reach high school with lower test scores and less advantaged socioeconomic circumstances, tracking works to the disadvantage of minority students and contributes to achievement gaps" (p. 5).

In 1990, Oakes endeavored to examine potential programming disparities between Black, Hispanic, and low socioeconomic students and their white, affluent peers in the field of science and mathematics. Seven years prior, the National Science Foundation had announced its commitment to excellence in math and science education for all students, regardless of demographic characteristics. This sentiment was echoed by the National Science Board (1983), who acknowledged:

the opportunity to learn mathematics, science, and technology is at present not fairly and evenly provided to all students.…[S]uch inequalities have resulted from…inadequate educational programs in some communities or for certain groups of students and from the erroneous belief that many students lacked the ability to learn mathematics and science. (p. 13)

In response to these statements, Oakes set out to identify the differences in science and mathematics curriculum, resources, instruction, and teachers made available to various groups of students and to articulate how those differences affected students'

resulting achievement. Data from the 1985-86 National Survey of Science and Mathematics Education (as cited in Oakes, 1990) were used, a sampling that included nearly 1200 public and private schools both elementary and secondary. From that sample, approximately 6000 teachers were selected, and for each secondary instructor, one math or science class was randomly chosen to serve as the subject for classroom-specific analysis. Each participant was provided a questionnaire with items focused on math and science programming, curriculum, and classroom instructional practice as well as teacher preparation, experience, and beliefs; data were also collected regarding students' race, socioeconomic status, gender, and ability level. Cross-tabulations, correlational analyses, and analysis of variance were used to investigate distribution of opportunity. The findings revealed empirical data justifying concerns articulated by both the National Science Foundation and the National Science Board. Quality math and science programming, teachers, materials, and instruction were less accessible to low-income, African-American, and Hispanic students due to the concentration of these populations in disadvantaged schools or low-level tracks. According to Oakes:

> students' background characteristics and schools' use of tracked classes combine in ways that place low-income and minority students doubly at risk. Because of the overlap of race, SES, and placement in low-track classes, minority and low-income students' access to learning opportunities is limited beyond what would be expected from [simply] being enrolled in either a disadvantaged school or a low-track class. (p. 102)

A Cultural Shift in American Public Education

During the latter half of the twentieth century, a series of cultural, economic, and global events aligned that would dictate the direction for public education in the U.S. for decades to come. The 1957 landing of the Russian space satellite, *Sputnik*, not only marked the United States' defeat in the race to space but also set a new course regarding the federal government's role in education reform (Anderson-Steeves, Bernhardt, Burns, & Lombard, 2009). The ensuing cover story of *Life* magazine, which included the bold and apocalyptic headline, 'Crisis in Education,' depicted the starkly divergent educational experiences of a "typical" Russian and American teenager. The Russian was portrayed as a serious student, immersed in the study of science and math, while the American student was accused of a squandering his education. This rhetoric captured many Americans' belief that Russia's success in space was the product of a superior schooling system (p. 74). For many, our education system's seemingly soft stance on rigor and academia was the natural and rightful scapegoat for America's failure to land on the moon before the Soviets (Kliebard, 1979).

In 1959, former Harvard University President James Bryant Conant published a series of reform recommendations stressing the critical role of education in maintaining and developing a democratic society, advocating for an increase in rigor by way of teaching subjects of a more academic nature, and denouncing strict program tracking in favor of ability grouping by subject level (Kliebard, 1979, p. 282-283). Conant's report was published only a few months after the passage of the National Defense Education Act, which allocated significant amounts of funding toward the development of science, math, and foreign language curriculum. The combination of these events not only set the

precedent for reform based on fear of global failure, but also catapulted America into a new era of curriculum design, organization, and delivery.

Except for a short time in the 1970s when student choice (via a burgeoning selection of elective courses) became a primary factor in curricular offerings and student achievement, academic rigor and high standards for learning again became the mantra for public education by the 1980s (Johanningmeier, 2010). While the Cold War was ultimately held responsible for America's commitment to educational reform during the middle decades of the twentieth century, its conclusion did not diminish the spotlight glare still positioned on public education. The 1983 publication of *A Nation at Risk* published by the National Commission on Excellence in Education offered very little by way of new information or direction, but served instead as the next generation's dose of admonition and rebuke, advancing the theme of American education's continued failure. The Commission equated the modern world with "one global village" where "determined, well-educated, and strongly motivated competitors" would require "knowledge, learning, information, and skilled intelligence" to successfully compete in an international marketplace (1983, pp. 6-7). According to Johanningmeier (2010), "the nation's need for knowledgeable human capital…and the movement to extend equality of educational opportunity to all students without regard to their race, ethnicity, religious convictions, gender, or their position in the social class hierarchy" had begun to again dominate the reform discussion (p. 352).

Given this educational climate of the late 80s and early 90s, the deeply rooted practice of sorting and selecting students according to perceived ability became even less palatable. Not only was ability grouping perceived as inequitable and even socially

repressive, but it was also charged with academically damaging certain populations of students. To this end, a number of consortiums, including the National Governors' Association, the Carnegie Corporation, and the College Board, supported detracking efforts as part of their educational reform initiatives (Oakes & Lipton, 1992). By 1998, the National Education Association included a resolution statement calling for the elimination of "discriminatory academic tracking based on economic status, ethnicity, race, or gender" in "all public school settings" (National Education Association, 2012). High expectations regarding academic performance and egalitarian practice demanded a new curricular and organizational structure, and detracking offered a logical recourse.

<center>The Detracking Movement</center>

Despite the massive shift away from tracking in theory, schools have been reluctant to implement widespread detracking in practice. As late as 2000, a survey of 174 Maryland high schools revealed nearly two-thirds were still tracking core subjects while only 13% deemed themselves completely detracked (Hallinan, 2004). This sluggish progress has been the result of a variety of factors, one being the increased hardship associated with teaching in a heterogeneous classroom. Teachers complain of widely varying ability levels that necessitate "teaching to the middle" or even eliminating portions of the curriculum due to the logistical difficulty of effectively instructing many diverse learners at the same time in the same classroom. The management of system-wide detracking can require the reallocation of staff, comprehensive curriculum revision, and considerable professional development – all of which have both logistical and financial implications (Hallinan, 2004). Even more profoundly challenging, however, has been the accompanying shift in paradigm.

According to Oakes and Lipton (1992), effective detracking practices demand a transformative shift in not just practice, but also culture and paradigm. Traditional tracking practices are firmly rooted in the understanding of intelligence as a relatively static and scientifically measurable entity. Given the work of contemporary researchers proposing alternative theories regarding intelligence, the notion of sorting students based on a perceived, fixed measurement may require re-evaluation. Also under scrutiny: established norms regarding curriculum and learning. Instead of viewing learning as the sequential accumulation of knowledge and skills, proponents of detracking suggest learning as the complex, non-linear process of constructing new meaning, a process likely to differ by individual. Curriculum must also be reconsidered – perhaps as a dynamic learning program built around "rich and complex ideas" rather than a "highly sequenced [progression] that focuses on discrete topics and skills" (Oakes & Lipton, 1992, p. 449). The path toward dismantling the age-old practice of tracking, then, "involve[s] a critical and unsettling rethinking of fundamental educational norms" (Oakes & Lipton, 1992, p. 449). Authors Burris and Garrity (2008) concurred:

> Detracking requires teachers to examine their practices, learn new techniques, and change how they teach as the range of achievement levels in their classes widens…[but also] a sense of mission grounded in the belief that public schools are democratic institutions dedicated to the success of all students, not just the academic elite. (p. 14)

This foundational shift in understandings, beliefs, and attitudes regarding learning is required not only of educators implementing the reform, but also the variety of stakeholders who support the educational community. As has often been the case

historically, those who benefit most from a deeply entrenched status quo—in this case, the "academic elite"—are not always accepting of such shifts. Wells and Serna (1996) examined ten ethnically and socio-economically diverse secondary schools across the country involved in detracking initiatives, seeking to "capture the essence of the political struggles inherent in such efforts" (p. 94). As part of the study, researchers identified stakeholders with the economic, political, and cultural capital necessary to deter detracking efforts (referred to as "local elites"), motivated by preserving the privileged status enjoyed by their children within the current organizational structure. Threatened with losing their high-track status as supported by the traditional system, "local elites," (largely characterized as "more White, wealthy, and well-educated") employed a variety of tactics designed to influence the direction and implementation of detracking practices. They threatened flight, connected with similar "elites" within the educational system, co-opted "not-quite-elite" support, and accepted preferential treatment (bribes) in exchange for passive support of detracking initiatives. Despite worthy aims of abolishing inegalitarian practices (tracking) in favor of more egalitarian ones (detracking), the absence of formal structures has sometimes resulted in subversive action by those with the skills necessary to navigate the system, consigning poor and minority students to the ranks of "educational loser" once again. As Lucas (1999) noted, "the dismantling of formal programs has probably *increased* the information gap between the haves and the have nots" (p. 132).

Teacher opposition, logistical hardship, financial commitment, a foundational shift in beliefs and attitudes regarding educational norms, and resistance from stakeholders have all posed significant challenges in the quest to eliminate tracking. No

less, the states of Massachusetts and California met surprisingly little resistance from school districts when each Department of Education issued documents (*Caught in the Middle* in California in 1987 and similarly titled, *Magic in the Middle* by Massachusetts in 1993) outlining reform efforts for middle level improvement—one of those agenda items being the elimination of tracking (Loveless, 1999). No mandate was issued; no sanctions were threatened for non-compliance; and no bureaucratic entity was formed to manage implementation. Nonetheless, hundreds of schools abandoned tracking practices, and proponents of detracking claimed victory (p. 3). Ten years later, Loveless (2009) presented updated Massachusetts tracking statistics, and the trend remained. From 1991 to 2009, the percentage of middle schools with one level of English Language Arts, history, and science and no more than two levels of math (characteristics of a "detracked" school for purposes of the study) almost doubled, from 24.4% to 46.9% (p. 18).

In contrast, national tracking statistics (as reported to NAEP) remained nearly constant (Loveless, 2009). In 1992, 73% of eighth grade math classes were tracked. This figure dropped to 71% in 1996 before increasing to 75% in 2007 (p. 16). English language arts classes, traditionally less-tracked than math, decreased from 48% to 31% tracked (1992 – 1996) but returned to 43% tracked by 2003 (p. 16). (It is important to note that indicators on the NAEP survey do not allow for qualified responses; any degree of leveled coursework is identified as tracking.) Despite the success rate in Massachusetts and other isolated settings, this data demonstrates reformers' systematic failure to institutionalize the practice of complete detracking on a large scale.

Effects of Detracking on Student Learning

The basic philosophy underlying the detracking movement is the use of heterogeneous grouping for instruction. Past that general framework, definitions and practices have varied. Some organizations consider the elimination of non-college tracks (only) "detracking" while others have developed programs that place "'high potential/low achieving'" minority students in college-preparatory coursework and consider it "detracking." Removing leveled courses in one department or one grade or the practice of determining track placement solely on student choice have also been regarded by some as detracking (Rubin, 2003, p. 542).

This wide understanding and application has made it a relatively difficult phenomenon to study. As previously mentioned, implementation of system-wide detracking—regardless of how it is defined—is a considerable challenge due to a host of logistical, financial, attitudinal, and cultural obstacles. As a result, the number of schools with strictly detracked course offerings available for study remains limited. Considering the many variations of "detracking" taking place in schools, some even unreported due to limited, "dichotomous indicators" of tracking practice on surveys such as NAEP's (Loveless, 2009), researchers' abilities to clearly demonstrate achievement effects between tracked and untracked settings has been further complicated (Rubin, 2003). As a result, the body of literature is less expansive and perhaps less conclusive than the research on tracking.

Detracking and Achievement

Cognizant of the detracking movement and the push to provide all students— regardless of perceived ability level, race, or socioeconomic status—with challenging

curricula and capable instructors, Chicago Public Schools (CPS) mandated a college preparatory curriculum for all incoming ninth-graders the fall of 1997. Using 10 years of ninth-grade CPS cohort data, Allensworth et al. (2009) studied the effects of this widespread policy mandate, particularly interested in the findings given the district's urban setting and pervasively poor academic record. Researchers identified four areas of focus: general enrollment effects in Algebra I and English I, social distribution (race, ability level, disability status) in college preparatory courses both before and after policy implementation, academic outcomes resulting from enrollment in the more rigorous rather than remedial course (targeting the population most likely to have enrolled in remedial classes prior to detracking), and the general academic outcomes for all students, disaggregated by ability level.

Allensworth et al. (2009) used longitudinal cohort data beginning with the ninth-grade class of 1994-1995 and ending with the 2004-2005 class. The cohorts varied in size, ranging from 21,587 to 26,197 students and represented 59 CPS high schools. The district's general racial make-up has been approximately 50% African-American, 38% Latino, 9% white, and 3% Asian, with around 85% of students qualifying for free/reduced lunch (suggesting a largely poor population). Data sets also included administrative records, transcript information, and data from achievement tests for each student. Measures were constructed at the student, school, and cohort level, and control variables were established to limit the influence of other factors.

Findings indicated that the policy was implemented as intended, as evidenced by the equitable distribution of race and ability level in college preparatory courses. Thirty-three percent more students in the lowest ability group earned English I credit, and 10%

more earned Algebra I credit. Perhaps surprisingly (due to the increase in course difficulty), high school graduation rates for this particular population did not decline. However, among students taking Algebra I instead of a remedial course, grades declined and course failure rates increased. While general achievement data remained constant, this policy did not increase the number of students taking more advanced math courses (past Algebra I); nor did it increase the graduation or college entrance rates. There were no positive effects for students in average or high-ability groups: student absenteeism increased, and advanced students' reading assessment scores dipped nominally. Overall, this detracking policy designed to improve the graduation rate, increase enrollment in more advanced coursework, and increase lower-achieving students' likelihood of attending college was ineffective (Allensworth et al., 2009).

In 1995, Brewer, Rees, and Argys studied the effects of tracking on end-of-year mathematics achievement in tenth grade. While the treatment examined was tracking, the findings offered implications for detracking as well. These researchers used a sampling of 3,900 students from The National Educational Longitudinal Study of 1988 (NELS). In that study, more than 20,000 eighth grade students representing more than 100 schools were surveyed on topics such as academic achievement, family background, attitudes, and school experiences; these same students were polled again in tenth and twelfth grades. Also surveyed in 1988 were teachers, who were asked about class composition according to ability level.

Brewer et al. evaluated math achievement in above average, average, below average, and heterogeneous tenth grade classrooms "through the estimation of standard 'education production functions'" (p. 212) while controlling for sample selection bias.

Using the resulting estimates of achievement, predicted test scores for tracked settings were compared with predicted scores for mixed-ability settings. They found that tracking does impact math achievement, though the resulting effects were conflicting for different levels/groups of students: below-average students placed in a homogenous classroom suffered 5% losses while students in the high track performed 5% better. Students in classrooms identified as average experienced 2% decreases in achievement. While this study focused on estimated scores of tracked students, the implications for detracking efforts are clear: "these results suggest that [the elimination of tracking] would create winners and losers" (p. 214). Although struggling learners would likely experience more academic success in a heterogeneous setting, the authors reported, their gains would be realized at the expense of more advanced students.

In a follow-up study to his own *Tracking Wars* (1999), Loveless (2009) sought to identify changes in Massachusetts tracking and detracking practices since the 1990s, to continue analyzing factors motivating detracking and to examine achievement of high-level students in both tracked and untracked schools. Using a slightly edited version of the survey used in his previous study, Loveless solicited information from all Massachusetts middle schools regarding the number of tracks in place over the previous five-year span in English language arts (ELA), math, history, and science courses; of the 295 sites contacted, 128 sites responded (a 43% response rate). Achievement data from the Massachusetts Comprehensive Assessment System (MCAS) were also collected from 1995, 2005, and 2008.

Responses indicated that detracking efforts—initiated in the early 1990s at the behest of the State Department of Education—continued through 2009, with the mean

number of tracks decreasing in all four core subject areas. For the purpose of his study,

Loveless defined a "detracked" school as one offering one level of ELA, science, and

history and no more than two levels of math. Local control remained the norm with a

slight increase in centralized decision-making (indicating this particular issue had become

more uniformly controlled). When asked, principals reported school administrators,

district officials, and teachers (rather than parents, community members, or state

education officials) as having the greatest influence on whether and how detracking

occurred. In terms of achievement, eighth grade ELA assessment scores showed almost

no variance between tracked and untracked schools (with approximately 13% scoring in

the advanced range and 66% scoring in the proficient range). Math scores, conversely,

indicated much greater variance. As the number of tracks within a school increased, so

too did the number of students scoring in the advanced range. This trend was mirrored at

the other end of the achievement spectrum: the number of students in the *needs*

improvement or *failing* range decreased with each level added. When socioeconomic

demographics were controlled, each level of track added in the area of math (up to three

levels) accounted for an additional 3% of students scoring in the advanced level. Though

tracks have progressively been eliminated throughout the state of Massachusetts,

Loveless offered data suggesting detrimental effects on high achieving students,

corroborating the findings of Brewer et al. (1995).

In 2008, Burris and Garrity published very different detracking results. They

recounted one district's efforts to systematically eliminate tracks in the middle and high

school, an initiative that met with great success. Efforts to establish equitable educational

opportunities for all students began in the Rockville Centre School District in Rockville

Centre, New York, in 1989 with the development of an honors curriculum intended for all middle school English and social studies students. Six years later, South Side Middle School completely eliminated all tracks in mathematics for in-coming sixth graders. As eighth graders, 84% of students passed the state regents exam with 52% scoring better than an 85% (p. 10). South Side also revised its enrollment policy for its advanced eighth grade math course, Sequential 1 Mathematics. Over three years (1992 - 1995) enrollment increased from one-third of the eighth grade class to almost half of the class. Despite the increase in enrollment (and increased heterogeneity), the median score on the state regents exam remained stable, shifting from 95% to 94% (p. 9)

In 1998, South Side High School detracked all English and social studies courses, beginning with its ninth grade class. All students were enrolled in what was previously considered the "honors" course. Burris and Garrity reported positive results: there were fewer behavior problems; students previously enrolled in low track courses experienced success in the new course; the academic tone remained similar to that of a traditional "honors" course; and final exam results were "good" (p. 11). Further detracking efforts in grade 10 began the fall of 2003 in the areas of social studies and English. Two years later, Mathematics B was detracked (an advanced math course once offered to accelerated tenth-graders only) followed by Chemistry one year later.

The authors cited several statistics indicating the positive effects of detracking on a diverse range of students. In 2000, 84% of students earned a Regents diploma (indicating their successful completion of a state recommended college preparatory course of study), and by 2005, that number increased to 97%. From 2000 – 2005, the number of minority students earning a Regents diploma increased from 32% to 92%.

Over the same period, the number of special needs students earning this diploma jumped from 26% to 76%. In 1997, fewer than 30% of graduates were enrolled in one International Baccalaureate (IB) course, and only 6% graduated with an IB diploma. Ten years later, over 80% of students were enrolled in at least one IB course, and one-third of graduates earned an IB diploma. From 1999-2006, the percentage of minority students electing to take an accelerated course of study resulting in an IB diploma increased from 6% to nearly one-third of the population (p. 13).

Such mixed results beg the question: why does detracking seem to work in some settings but not others? Researchers have seemed to agree on the comprehensive commitment required to produce meaningful change (Allensworth et al., 2009; Rubin, 2006). More than curricular restructuring, successful detracking requires the establishment of what Oakes and Lipton (1992) described as a "culture for detracking" (p. 452). They stress the very individual, locally developed nature of a successful detracking reform, borne of inquiry and investigation: "…one school's successful alternative or restructured practice can become another school's slick, packaged, and soon-to-be-abandoned flash in the pan" (p. 452). Rubin (2006) agreed:

> the most successful instances of detracking combine deep structural reform with thoughtful pedagogical change, and are undergirded by an engagement with students' and teachers' beliefs around notions of ability and achievement. When these facets converge, the positive results for students are startling. (p. 7)

Detracking and Gender

Considering the limited research on the achievement of males and females in tracked settings, it comes as little surprise that studies examining the effect on gender in

detracked settings do not seem to exist. Given the challenges associated with straightforward detracking research—studies simply attempting to determine achievement effects—it may be clear why this particular variable is ignored. Perhaps the absence of literature is better explained by the general lack of urgency in this particular niche of the research field. While tracking opponents have long championed demographic groups they deemed "victimized" by an inequitable organizational structure, gender groups have not been among them due to limited evidence of negative effects.

Detracking and Ethnicity

Authors Alvarez and Mehan (2006) reported detracking success resembling that of the Rockville Centre School District (Burris & Garrity, 2008). In the spirit of whole school detracking, the University of California, San Diego established the Preuss School in 2002, a charter school designed to prepare low-income students for college via a college preparatory curriculum, increased student "seat time," and a network of academic and social support. Given the strong correlation between socio-economic status and race, the school's population has been largely comprised (more than 90%) of minority students. Only students from low-income backgrounds who exhibit high potential are eligible, and enrollment is determined by a lottery system. No less, a culture of high expectations, academic rigor, a personalized learning environment, additional support as necessary, and teachers engaged in their own professional learning are cited as factors influencing positive results.

While 80% of the first graduating class attended a 4-year college, the remaining 20% enrolled in community colleges. Ninety percent of the class of 2004 passed the California High School Exit Exam during their junior year, while 92% of the 2005

graduating class passed the exam during their sophomore year. During 2002-2003, eighth through eleventh-graders sat for 327 AP exams with 37% receiving college credit as a result (by earning a score of 3 or higher), and in 2004, 98% of Preuss students took the SAT-I, surpassing the state average by 12%. In response to the extensive research identifying economic standing as significant barriers to learning, Alvarez and Mehan (2006) offer the Preuss school as "proof that students from low-income backgrounds [and largely minority] can succeed in a rigorous course of study when provided the appropriate academic and social supports" (p. 87).

In a very different study, Yonezawa, Wells, and Serna (2002) described ten racially and socio-economically diverse secondary schools involved in voluntary detracking, each using the mechanism of "student choice" as the means to establish equitable access to higher-level tracks. Schools varied in size, from populations of 500 to 3,000, were comprised of varying combinations of white, African-American, Latino, Asian, and Pacific-Islander populations, and were located in various geographic regions across the United States. Over a period of two years, researchers collected data, which included interviews (with administrators, teachers, students, parents, community members, and policy makers), classroom observations, and document analysis. Using this data, single-case-studies were developed, which were later used to develop cross-case themes.

Through this qualitative process, Yonezawa, Wells, and Serna (2002) yielded three predominant themes explaining the schools' inability to detrack effectively: institutional barriers, tracked aspirations, and choosing respect. Institutional barriers included schools' failure to distribute information (e.g., regarding enrollment dates or

opportunities) equitably, selective flexibility in granting course placement (e.g., providing immediate access to "high status" students requesting advanced courses while manufacturing obstacles for minority students with the same request), and the existence of hidden prerequisites (varied requirements designed to deter some students from enrolling in advanced classes). The theme of tracked aspirations described low- and middle-track students' perceptions of themselves as incapable of achieving at a level demanded in high-track courses: "when left to their own devices, they chose familiar spaces with familiar faces, re-segregating themselves along the same lines and labels" (p. 51). Choosing respect was evidenced by low- and middle-track students who refused high-track placement simply to earn the respect afforded them by like-minded peers or to maintain the sense of identity and belonging often established along socio-economic or racial lines (often established in lower-track classes given the disproportionate number of poor and minority students enrolled). Detracking by choice did little to address the over-representation of minority students in low-track courses in any of the schools studied. Ultimately, these schools' endeavors to eliminate the inequity inherent within their own tracked structures and to de-stratify already diverse populations were hindered by their own methodology, adding credence to theories suggesting the critical role our collective deep-seated beliefs play in determining the ultimate success of such a reform.

Summary

Chapter two provided a historical narrative outlining the origins of ability grouping and its development through the twentieth century. Tracking has long been a controversial practice, charged as both ineffective and inequitable. Findings from studies examining these very theories were articulated, especially as they relate to various ability

levels, gender, and ethnicity. A counter movement, detracking, was also described,

including the political, societal, and educational forces impelling its rise. This chapter

concluded with a thorough review of studies investigating the effect of detracking on

achievement, including some discussion of demographic subgroups. Chapter three offers

a detailed explanation of methodology for this study.

CHAPTER THREE

METHODS

The problem addressed by this study was whether MSD's Advanced Studies middle school communication arts curriculum was effective in increasing student achievement. As stated in chapter one, the purpose of this study was to determine whether there is a difference in communication arts growth as measured by the Missouri Assessment Program (MAP) among groups of students enrolled in one of four curricular paths. A second purpose was to determine whether the difference in achievement was affected by gender or ethnicity.

This chapter defines the methodology employed to answer the research questions and test the hypotheses. Specifically, chapter three identifies the research design, describes the population and sample, discusses procedures for determining the sample, and defines the instrumentation and measurement tool including its validity and reliability. Also included are data collection procedures, methods used to analyze data and test hypotheses, and limitations to the study.

Research Design

This quantitative study followed a quasi-experimental four-group pre-test/post-test design. The dependent variable was defined as communication arts growth, which was measured by the difference in scale score from sixth to seventh, seventh to eighth, and sixth to eighth grades on the Communication Arts portion of the MAP. Three independent variables were examined as part of this study: curricular path, ethnicity, and gender. Four curricular paths were determined according to students' communication arts course selection during seventh and eighth grade as depicted in Table 3 in chapter

one (p. 9). For the purpose of this study, multiple ethnic categories were collapsed into "White" and "non-White" (which included Asian, Black, Hispanic, Native American, and Alaskan Native) groups.

Population and Sample

The population under examination consisted of 1,482 students. Each of these students attended MSD and was enrolled in sixth grade during the 2006 – 2007 school year, seventh grade during the 2007 – 2008 school year, and eighth grade during 2008 – 2009. The sample included 1,062 students who met further established criteria: consistent enrollment during the years examined in this study, enrollment in one of four articulated curricular paths, and availability of all demographic and assessment data.

Sampling Procedures

This study employed purposive sampling procedures, defined by Lunenburg and Irby (2008) as a sample selection process utilized by the researcher based on his/her "knowledge or experience of the group to be sampled" (p. 175). This sample was defined using the following criteria: students attended sixth, seventh, and eighth grades in MSD from 2006 – 2007 to 2008 – 2009 school years; all members of the sample followed one of four curricular paths as set forth in Table 3 in chapter one; and both MAP achievement data and demographic information were available for each student each year, 2007 - 2009. Finally, this sample was selected because of its unique experience: students in this group were subject to the middle school communication arts curriculum both before and after MSD's implementation of the Advanced Studies program.

Instrumentation and Measurement

The Communication Arts portion of the MAP was the tool used to measure the dependent variable, communication arts growth as determined by the difference in scale score from sixth to seventh, seventh to eighth, and sixth to eighth grades. This state assessment was one result of the Outstanding Schools Act of 1993 and was developed based on the "knowledge, skills, and competencies" to be mastered by students by the end of each grade level known as the Show-Me Standards and Grade Level Expectations (Missouri DESE, 2009b, p. 1).

As described in the *Guide to Interpreting Results* published by the Missouri Department of Elementary and Secondary Education (DESE) (2009b), the Communication Arts portion of the MAP is administered to all students in grades three through eight during the spring of each school year. The assessment includes multiple sessions with total testing time ranging from three to five hours. Three types of testing items may appear on the test: selected-response, constructed-response, and performance events. Selected-response items (i.e., multiple-choice questions) provide three to five possible responses for student selection; a portion of these questions is drawn from the nationally normed *TerraNova* designed by CTB/McGraw-Hill. Constructed-response items require students to compose their own response to an open-ended question, providing some insight into students' mastery of the concept as well as the process used to arrive at that answer. Within the Communication Arts portion of the test, a writing performance event, or essay, is also administered in seventh grade. All students must respond to a process-oriented writing prompt to demonstrate proficiency in writing; this composition is graded holistically, on a four-point scale.

According to the *Guide to Interpreting Results*, (Missouri DESE, 2009b), the resulting achievement indicator, a single scale score, represents the number of correct responses earned by a student. These scale scores are placed in context along a continuum spanning from third to eighth grade that provides a longitudinal perspective regarding a student's academic growth during this time period. Within Communication Arts, this range falls between 455 and 875. Because of this, scale scores within an academic discipline may be compared from grade to grade, added, subtracted, and/or averaged. Each year scale scores are also used to indicate a student's achievement level as advanced, proficient, basic, or below basic (Missouri DESE, 2009b, p.4).

This Communication Arts assessment provides useful information regarding academic achievement and progress rendering it an appropriate and effective measurement of growth for the purposes outlined in this study. First, a critical pedagogical connection exists as both MSD communication arts curriculum and the state Communication Arts assessment are based on the same "knowledge, skills, and competencies" (Missouri DESE, 2009b, p. 1); consequently, student growth indicators are the product of an external measurement of performance aligned to benchmarks identical to those guiding classroom instruction. Additionally, use of this assessment offers a non-intrusive benefit to students and staff as it is already administered annually and is a fixed component of the assessment culture in MSD. Finally, further credence is given to the suitability of this tool by the degree of embedded application within MSD. MAP data are already used by district officials and teachers as the basis for vital instructional decisions including program development and revision, curriculum revision, program assignment, and even classroom instruction.

Validity and reliability

The integrity of the MAP is maintained by the rigorous measures employed by the Missouri Department of Elementary and Secondary Education (DESE) in its development and revision of this assessment. The process begins with specification, as "test blueprints are developed and reviewed" (Missouri DESE, 2007, p. 64). Then, "content experts determine that the *TerraNova* items…measure the Standards, and Missouri educators [write] constructed-response items and performance events that match the designated Standard" (Missouri DESE, 2000, para. 7). Next "groups of Missouri educators review each item to insure that it [does] indeed measure the content or process called for in the Standard" (Missouri DESE, 2000, para. 7). Finally, drafts of the assessment are field tested before final construction and preparation for official administration. As described, this process, combined with the involvement of key stakeholders, supports an assessment product that is both reliable and valid.

At the end of each MAP testing cycle, DESE provides a Technical Report offering statistical evidence of construct-related validity. According to Salkind (2008), reliability is defined as "the quality of a test such that it is consistent" (p. 393). For tests administered in 2007, 2008, and 2009, Cronbach's Alpha was used to determine the reliability of raw scores. The 2007 Grade 6 Communication Arts portion of the MAP was found to have a 0.90 reliability coefficient; the 2008 Grade 7 test earned a 0.92; and the reliability coefficient for the 2009 Grade 8 test was reported as 0.91 (Missouri DESE, 2007, p. 70; 2008, p. 167; 2009a, p. 146). According to the 2007 Report, "reliability coefficients that are equal or greater than 0.9 are considered acceptable for tests of

lengths similar to the MAP" (p. 65). Given this benchmark, each Communication Arts portion of the MAP administered from 2007 – 2009 was deemed statistically reliable.

The 2007 Technical Report discusses the concept of convergent validity as it relates to the MAP as a valid measurement tool. Convergent validity is a phenomenon occurring when "analyses of the internal structure of a test can indicate the extent to which the relationships among test items conform to the construct the test purports to measure" (p. 68). If test items are found to measure a "single content domain," the assessment is determined unidimensional (p. 68). Principal Component Analysis was used to establish a "single or dominant factor" thereby suggesting unidimensionality of this test (p. 68). Each Technical Report years 2007 – 2009 offers a similar finding: "the ratio of variance accounted for by the first factor to the second and third is sufficiently large to support the claim that these tests are essentially unidimensional" (Missouri DESE, 2008, p. 164). Simply put, the Communication Arts portion of the MAP is a valid measurement of the Standards it claims to assess.

<center>Data Collection Procedures</center>

Prior to collecting data, the researcher completed and submitted required forms to request permission to research and collect data in MSD (see Appendix A); this request was granted by district leadership on February 14, 2011 (see Appendix B). The researcher submitted a similar request to the Baker University Institutional Review Board seeking approval from the university to conduct this study (see Appendix C). Once approved on August 24, 2011 (see Appendix D), explicit parameters regarding the data sets and coding process were discussed with the district's Director of Assessment and Data Analysis and a computer technologist. Archived data sets were harvested directly

from the Oracle database used by PowerSchool for data storage and the MAP Report

Card sent to MSD by the Missouri Department of Elementary and Secondary Education;

all data were merged into a Microsoft Excel workbook by a district computer

technologist. This information included student gender, ethnicity, a Communication Arts

MAP scale score from each of the 2007, 2008, and 2009 assessments, and

communication arts course enrollment. All data were coordinated and attached to a

randomized student number by the same computer technologist, and the data were

uploaded into IBM® SPSS® Faculty Pack 21 for Windows for analysis.

<center>Data Analysis and Hypothesis Testing</center>

Communication arts growth was calculated three ways: the difference in the MAP

scale score between sixth and seventh grade, seventh and eighth grade, and six and eighth

grade. Three ANOVAs were conducted crossing ethnicity with curriculum path; three

additional ANOVAs were conducted crossing curriculum path with gender. When

significant differences were discovered, a post-hoc analysis was conducted using Fisher's

Least Significant Difference (LSD) to determine specific differences between pairs of

means. The following hypotheses, listed after each relevant research question, were

tested for statistically significant differences among communication arts growth means:

RQ_1: To what extent is there a difference in communication arts growth as

measured by a difference between the sixth and seventh grade scale score on the

Communication Arts portion of the MAP among groups of students enrolled in one of

four curricular paths?

H_1: There is a difference in growth, as measured by the difference from sixth to

seventh grade Communication Arts MAP scale scores, among students enrolled in one of

four curricular paths at the 0.05 level of significance. The data were analyzed using the main effect for curricular path in the two-factor ANOVA (sixth to seventh grade growth by curricular path) to determine if a significant difference in Communication Arts growth existed amongst students enrolled in one of four curricular paths.

RQ$_2$: To what extent is there a difference in communication arts growth as measured by a difference between the seventh and eighth grade scale score on the Communication Arts portion of the MAP among groups of students enrolled in one of four curricular paths?

H$_2$: There is a difference in growth, as measured by the difference from seventh to eighth grade Communication Arts MAP scale scores, among students enrolled in one of four curricular paths at the 0.05 level of significance. The data were analyzed using the main effect for curricular path in the two-factor ANOVA (seventh to eighth grade growth by curricular path) to determine if a significant difference in Communication Arts growth existed amongst students enrolled in one of four curricular paths.

RQ$_3$: To what extent is there a difference in communication arts growth as measured by a difference between the sixth and eighth grade scale score on the Communication Arts portion of the MAP among groups of students enrolled in one of four curricular paths?

H$_3$: There is a difference in growth, as measured by the difference from sixth to eighth grade Communication Arts MAP scale scores, among students enrolled in one of four curricular paths at the 0.05 level of significance. The data were analyzed using the main effect for curricular path in the two-factor ANOVA (sixth to eighth grade growth by

curricular path) to determine if a significant difference in Communication Arts growth existed amongst students enrolled in one of four curricular paths.

RQ_4: Is the difference in communication arts growth as measured by the MAP scale score affected by ethnicity among students enrolled in one of four curricular paths?

H_4: The difference in communication arts growth, as measured by the difference between sixth to seventh grade Communication Arts MAP scale scores, among students enrolled in one of four curricular paths is affected by ethnicity at the 0.05 level of significance. The interaction effect of a two factor ANOVA (curricular path by ethnicity) was utilized to test for differences in communication arts growth between sixth and seventh grade.

H_5: The difference in communication arts growth, as measured by the difference between seventh to eighth grade Communication Arts MAP scale scores, among students enrolled in one of four curricular paths is affected by ethnicity at the 0.05 level of significance. The interaction effect of a two factor ANOVA (curricular path by ethnicity) was utilized to test for differences in communication arts growth between seventh and eighth grade.

H_6: The difference in communication arts growth, as measured by the difference between sixth to eighth grade Communication Arts MAP scale scores, among students enrolled in one of four curricular paths is affected by ethnicity at the 0.05 level of significance. The interaction effect of a two factor ANOVA (curricular path by ethnicity) was utilized to test for differences in communication arts growth between sixth and eighth grade.

RQ_5: Is the difference in communication arts growth as measured by the MAP scale score affected by gender among students enrolled in one of four curricular paths?

H_7: The difference in communication arts growth, as measured by the difference between sixth to seventh grade Communication Arts MAP scale scores, among students enrolled in one of four curricular paths is affected by gender at the 0.05 level of significance. The interaction effect of a two factor ANOVA (curricular path by gender) was utilized to test for differences in communication arts growth between sixth and seventh grade.

H_8: The difference in communication arts growth, as measured by the difference between seventh to eighth grade Communication Arts MAP scale scores, among students enrolled in one of four curricular paths is affected by gender at the 0.05 level of significance. The interaction effect of a two factor ANOVA (curricular path by gender) was utilized to test for differences in communication arts growth between seventh and eighth grade.

H_9: The difference in communication arts growth, as measured by the difference between sixth to eighth grade Communication Arts MAP scale scores, among students enrolled in one of four curricular paths is affected by gender at the 0.05 level of significance. The interaction effect of a two factor ANOVA (curricular path by gender) was utilized to test for differences in communication arts growth between sixth and eighth grade.

Limitations

According to Roberts (2004), limitations are uncontrollable elements of the study that may impact results or inhibit the researcher's ability to generalize the findings. The

researcher is cognizant of the following limitations, which may or may not have influenced results:

1. Growth in academic performance is based partially on a student's investment in the learning process, from instruction to assessment. This critical element is controlled by the student only.

2. While the formal, written curriculum can be determined by organizational leaders and program planners, the taught curriculum varies from classroom to classroom based on teacher competence, attitude, and understanding of the prescribed curriculum. Consistency of curriculum delivery could not be controlled by the researcher.

3. Data used in this study were compiled, transferred, and disseminated by various parties; given the possibility of human and computer error, the researcher cannot guarantee the accuracy of all records.

Summary

Chapter three presented an overview of the methodology and procedures used to determine differences in communication arts growth as affected by curricular path, gender, and ethnicity. Differences in growth as measured by the Communication Arts portion of the MAP were compared using a factorial analysis of variance. Chapter four presents the results of the study.

CHAPTER FOUR

RESULTS

The purpose of this study was to determine whether there is a difference in communication arts growth, as measured by the Missouri Assessment Program (MAP), among groups of students enrolled in one of four curricular paths and to determine whether the difference in achievement was affected by gender or ethnicity. The previous chapters offered a description of relevant background information, literature related to effectiveness of both the tracking and detracking movement, and methodology employed in this study. This chapter presents the results of the data analysis.

Descriptive Statistics

The population included 1,482 students enrolled in sixth grade in 2006 – 2007, seventh grade in 2007-2008, and/or eighth grade in 2008 – 2009. Subjects included in the sample of 1,062 were consistently enrolled throughout the school years previously listed, were enrolled in one of four identified curricular paths, and had complete assessment and demographic data sets. Subjects were assigned to one of four groups as determined by their curricular programming in seventh and eighth grade (considering all students received the same curriculum in sixth grade): Group 1 students continued to take the grade level curriculum in both seventh and eighth grade; Group 2 was enrolled in the grade level curriculum in seventh grade but moved into the new Advanced Studies course in eighth grade; students in Group 3 were in the gifted course (*ACE*) in seventh grade before moving into the Advanced Studies program the following year; and Group 4 students moved from *ACE* into the standard grade level course in eighth grade. Table 4 provides demographic information about each group, including gender and ethnicity.

Table 4

Demographics of the Sample by Curricular Path

	Group 1	Group 2	Group 3	Group 4	Total
Female	325	187	42	1	555
Male	356	107	38	6	507
White	548	262	72	6	888
Non-White	133	32	8	1	174
Total	681	294	80	7	

The sample included 556 females and 506 males; 888 students were White while 174 were identified as non-White (which included Asian, Black, Hispanic, Native American, and Alaskan Native). There were 681 students in Group 1, 294 students in Group 2, 80 students in Group 3, and 7 students in Group 4.

Hypothesis Testing

This section provides results obtained from several analyses of variance (ANOVAs) examining the effect of curricular path on communication arts growth. Statistical findings based on the interaction between curricular path and ethnicity and between curricular path and gender are also reported.

RQ_1: To what extent is there a difference in communication arts growth as measured by a difference between the sixth and seventh grade scale score on the Communication Arts portion of the MAP among groups of students enrolled in one of four curricular paths?

H_1. There is a difference in growth, as measured by the difference from sixth to seventh grade Communication Arts MAP scale scores, among students enrolled in one of four curricular paths at the 0.05 level of significance

A one-factor analysis of variance (ANOVA) was conducted to test H_1. The categorical variable used to group the students' scores was curricular path, and the dependent variable used for this analysis was the difference between sixth and seventh grade Communication Arts MAP scale scores. The results of the analysis indicated a statistically significant difference between at least two of the means ($F = 3.875$, $df = 3$, 1058, $p = .009$). See Table 5 for the means and standard deviations for this analysis. A follow up post hoc was conducted to determine which pairs of means were different. The Fisher's Least Significant Difference (LSD) critical value was 9.892. The difference between the means had to be greater than this value to be considered significantly different ($\alpha = .05$). In this analysis, the mean for Group 1 ($M = 4.856$) was different from that of Group 4 ($M = 16.714$) indicating that students who took the standard, grade level curriculum did not improve as much as students enrolled in the gifted course. There were no other significant differences in growth among any of the other paths.

Table 5

Sixth to Seventh Grade Communication Arts Growth

Path	M	SD	N
Group 1	4.856	17.000	681
Group 2	8.442	18.486	294
Group 3	7.813	21.498	80
Group 4	16.714	20.164	7

RQ$_2$: To what extent is there a difference in communication arts growth as measured by a difference between the seventh and eighth grade scale score on the Communication Arts portion of the MAP among groups of students enrolled in one of four curricular paths?

H$_2$: There is a difference in growth, as measured by the difference from seventh to eighth grade Communication Arts MAP scale scores, among students enrolled in one of four curricular paths at the 0.05 level of significance.

A one-factor analysis of variance (ANOVA) was conducted to test H$_2$. The categorical variable used to group the students' scores was curricular path, and the dependent variable used for this analysis was the difference between seventh and eighth grade Communication Arts MAP scale scores. The results of the analysis did not indicate a statistically significant difference between at least two of the means ($F = 2.068$, $df = 3$, 1058, $p = .103$). See Table 6 for the means and standard deviations for this analysis. No post hoc analysis was warranted.

Table 6

Seventh to Eighth Grade Communication Arts Growth

Path	M	SD	N
Group 1	19.523	17.642	681
Group 2	17.384	17.367	294
Group 3	15.800	20.835	80
Group 4	11.714	19.050	7

RQ$_3$: To what extent is there a difference in communication arts growth as measured by a difference between the sixth and eighth grade scale score on the

Communication Arts portion of the MAP among groups of students enrolled in one of

four curricular paths?

H[3]: There is a difference in growth, as measured by the difference from sixth to

eighth grade Communication Arts MAP scale scores, among students enrolled in one of

four curricular paths at the 0.05 level of significance.

A one-factor analysis of variance (ANOVA) was conducted to test H[3]. The

categorical variable used to group the students' scores was curricular path, and the

dependent variable used for this analysis was the difference between sixth and eighth

grade Communication Arts MAP scale scores. The results of the analysis did not indicate

a statistically significant difference between at least two of the means ($F = .620$, $df = 3$,

1058, $p = .602$). See Table 7 for the means and standard deviations for this analysis. No

post hoc analysis was warranted.

Table 7

Sixth to Eighth Grade Communication Arts Growth

Path	*M*	*SD*	*N*
Group 1	24.379	18.489	681
Group 2	25.827	17.669	294
Group 3	23.613	20.617	80
Group 4	28.429	20.735	7

RQ[4]: Is the difference in communication arts growth as measured by the MAP

scale score affected by ethnicity among students enrolled in one of four curricular paths?

H[4]: The difference in communication arts growth, as measured by the difference

between sixth to seventh grade Communication Arts MAP scale scores, among students

enrolled in one of four curricular paths is affected by ethnicity at the 0.05 level of significance.

A two-factor analysis of variance (ANOVA) was conducted to test H$_4$. The two categorical variables used to group the students' scores were curricular path and ethnicity. Group 4 was not included in this analysis due to the limited minority population ($n = 1$), so only Groups 1, 2, and 3 were included in the analysis. The dependent variable used for this analysis was the difference between sixth and seventh grade Communication Arts MAP scale scores. The two-factor ANOVA can be used to test three hypotheses, including a main effect for curricular path, a main effect for ethnicity, and a two-way interaction effect (path by ethnicity). The interaction effect for path by ethnicity was used to test hypothesis four. The results of the analysis did not indicate a statistically significant difference between at least two of the means ($F = .853$, $df = 2$, 1049, $p = .426$). See Table 8 for the means and standard deviations for this analysis. No post hoc analysis was necessary.

Table 8

Sixth to Seventh Grade Communication Arts Growth by Ethnicity

	Ethnicity	*M*	*SD*	*N*
Group 1	White	4.427	17.128	548
	Non-White	6.624	16.403	133
Group 2	White	8.363	18.411	262
	Non-White	9.094	19.380	32
Group 3	White	8.472	20.872	72
	Non-White	1.875	27.430	8

H_5: The difference in communication arts growth, as measured by the difference between seventh to eighth grade Communication Arts MAP scale scores, among students enrolled in one of four curricular paths is affected by ethnicity at the 0.05 level of significance.

A two-factor analysis of variance (ANOVA) was conducted to test H_5. The two categorical variables used to group the students' scores were curricular path and ethnicity. Group 4 was not included in this analysis due to its limited number of minority students ($n = 1$), so only Groups 1, 2, and 3 were tested. The dependent variable used for this analysis was the difference between seventh and eighth grade Communication Arts MAP scale scores. The two-factor ANOVA can be used to test three hypotheses, including a main effect for curricular path, a main effect for ethnicity, and a two-way interaction effect (path by ethnicity). The interaction effect for path by ethnicity was used to test H_5. The results of the analysis did not indicate a statistically significant difference between at least two of the means ($F = 1.075$, $df = 2, 1049$, $p = .342$). See Table 9 for the means and standard deviations for this analysis. No post hoc analysis was necessary.

Table 9

Seventh to Eighth Grade Communication Arts Growth by Ethnicity

	Ethnicity	*M*	*SD*	*N*
Group 1	White	20.246	17.519	548
	Non-White	16.541	17.900	133
Group 2	White	17.401	16.708	262
	Non-White	17.250	22.368	32
Group 3	White	15.333	20.996	72
	Non-White	20.000	20.135	8

H_6: The difference in communication arts growth, as measured by the difference between sixth to eighth grade Communication Arts MAP scale scores, among students enrolled in one of four curricular paths is affected by ethnicity at the 0.05 level of significance.

A two-factor analysis of variance (ANOVA) was conducted to test H_6. The two categorical variables used to group the students' scores were curricular path and ethnicity. Group 4 was not included in this analysis due to its limited number of minority students ($n = 1$), so only Groups 1, 2, and 3 were tested. The dependent variable used for this analysis was the difference between sixth and eighth grade Communication Arts MAP scale scores. The two-factor ANOVA can be used to test three hypotheses, including a main effect for curricular path, a main effect for ethnicity, and a two-way interaction effect (path by ethnicity). The interaction effect for path by ethnicity was used to test H_6. The results of the analysis did not indicate a statistically significant difference between at least two of the means ($F = .152$, $df = 2, 1049$, $p = .859$). See

Table 10 for the means and standard deviations for this analysis. No post hoc analysis was necessary.

Table 10

Sixth to Eighth Grade Communication Arts Growth by Ethnicity

	Ethnicity	*M*	*SD*	*N*
Group 1	White	24.673	18.258	548
	Non-White	23.165	19.438	133
Group 2	White	25.763	17.321	262
	Non-White	26.344	20.600	32
Group 3	White	23.806	21.023	72
	Non-White	21.875	17.618	8

RQ$_5$: Is the difference in communication arts growth as measured by the MAP scale score affected by gender among students enrolled in one of four curricular paths?

H$_7$. The difference in communication arts growth, as measured by the difference between sixth to seventh grade Communication Arts MAP scale scores, among students enrolled in one of four curricular paths is affected by gender at the 0.05 level of significance.

A two-factor analysis of variance (ANOVA) was conducted to test H$_7$. The two categorical variables used to group the students' scores were curricular path and gender. Group 4 was not included in this analysis due to its limited number of female students ($n = 1$), so only Groups 1, 2, and 3 were tested. The dependent variable used for this analysis was the difference between sixth and seventh grade Communication Arts MAP scale scores. The two-factor ANOVA can be used to test three hypotheses, including a

main effect for curricular path, a main effect for gender, and a two-way interaction effect

(path by gender). The interaction effect for path by ethnicity was used to test H_7. The

results of the analysis did indicate a statistically significant difference between at least

two of the means ($F = 3.638$, $df = 2$, 1049, $p = .027$). See Table 11 for the means and

standard deviations for this analysis.

A follow up post hoc was conducted to determine which pairs of means were

different. The Fisher's Least Significant Difference (LSD) critical value was 5.350. The

differences between the means had to be greater than this value to be considered

significantly different ($\alpha = .05$). When examining differences in means between males

and females within paths, the males in Group 3 ($M = 13.000$) outperformed the females

($M = 3.119$). There was no difference in the means of females across paths, but the

means of males in Group 1 ($M = 4.281$) was different from that of Group 3 ($M = 13.000$).

Though marginal, there was also a difference between the means of males in Group 1 (M

$= 4.281$) and Group 2 ($M = 9.318$).

Table 11

Sixth to Seventh Grade Communication Arts Growth by Gender

	Gender	*M*	*SD*	*N*
Group 1	Female	5.486	16.795	325
	Male	4.281	17.188	356
Group 2	Female	7.941	18.447	187
	Male	9.318	18.609	107
Group 3	Female	3.119	23.029	42
	Male	13.000	18.613	38

H_8. The difference in communication arts growth, as measured by the difference between seventh to eighth grade Communication Arts MAP scale scores, among students enrolled in one of four curricular paths is affected by gender at the 0.05 level of significance.

A two-factor analysis of variance (ANOVA) was conducted to test H_8. The two categorical variables used to group the students' scores were curricular path and gender. Group 4 was not included in this analysis due to its limited number of female students ($n = 1$), so only Groups 1, 2, and 3 were tested. The dependent variable used for this analysis was the difference between seventh and eighth grade Communication Arts MAP scale scores. The two-factor ANOVA can be used to test three hypotheses, including a main effect for curricular path, a main effect for gender, and a two-way interaction effect (path by gender). The interaction effect for path by ethnicity was used to test H_8. The results of the analysis indicated a marginally significant difference between at least two of the means ($F = 2.528$, $df = 2, 1049$, $p = .080$). See Table 12 for the means and standard deviations for this analysis. Though not statistically significant, differences in means did exist. There was a difference between the means of Group 2 males ($M = 14.580$) and females ($M = 18.989$) and a difference between Group 3 males ($M = 13.553$) and females ($M = 17.833$). Though no difference in means amongst females existed, there was a difference amongst means for males across paths. The mean for males in Group 1 ($M = 19.941$) was different from males in both Group 2 ($M = 14.579$) and Group 3 ($M = 13.553$).

Table 12

Seventh to Eighth Grade Communication Arts Growth by Gender

	Gender	*M*	*SD*	*N*
Group 1	Female	19.065	17.789	325
	Male	19.941	17.521	356
Group 2	Female	18.989	15.637	187
	Male	14.579	19.803	107
Group 3	Female	17.833	17.470	42
	Male	13.553	24.058	38

H_9. The difference in communication arts growth, as measured by the difference between sixth to eighth grade Communication Arts MAP scale scores, among students enrolled in one of four curricular paths is affected by gender at the 0.05 level of significance.

A two-factor analysis of variance (ANOVA) was conducted to test H_9. The two categorical variables used to group the students' scores were curricular path and gender. Group 4 was not included in this analysis due to its limited number of female students (*n* = 1), so only Groups 1, 2, and 3 were tested. The dependent variable used for this analysis was the difference between sixth and eighth grade Communication Arts MAP scale scores. The two-factor ANOVA can be used to test three hypotheses, including a main effect for curricular path, a main effect for gender, and a two-way interaction effect (path by gender). The interaction effect for path by ethnicity was used to test H_9. The results of the analysis did not indicate a statistically significant difference between at

least two of the means ($F = 1.741$, $df = 2$, 1049, $p = .176$). See Table 13 for the means

and standard deviations for this analysis. No post hoc analysis was warranted.

Table 13

Sixth to Eighth Grade Communication Arts Growth by Gender

	Gender	*M*	*SD*	*N*
Group 1	Female	24.551	17.204	325
	Male	24.222	19.612	356
Group 2	Female	26.931	17.096	187
	Male	23.897	18.551	107
Group 3	Female	20.952	22.045	42
	Male	26.553	18.764	38

Summary

Chapter four provided a review of the descriptive statistics, including detailed

demographic information about the four groups examined. This chapter also presented

statistical analyses of each research question and accompanying hypothesis(es). Chapter

five offers a comprehensive evaluation of the findings, including connections to the

literature, implications for practice, and recommendations for future research.

CHAPTER FIVE

INTERPRETATION AND RECOMMENDATIONS

Previous chapters offered an overview of the study, including the research

questions and hypotheses driving this research; a narrative of tracking and detracking

practices of the twentieth century and their impact on student achievement, gender, and

ethnicity; a detailed description of methodology with explanations of sampling

procedures, instrumentation, and data analysis; and a presentation of statistical findings.

This chapter offers an analysis of the findings, including connections to the existing body

of literature, possible implications for practitioners, and recommendations for future

research.

Study Summary

The following sections provide a cursory review of the study for the purpose of

understanding the results within the context established in chapters one through four. A

summary of the problem, purpose, and research questions guiding this study as well as

methodology and major findings are discussed.

Overview of the Problem

The re-authorization of the Elementary and Secondary Education Act in 2001,

commonly recognized as the *No Child Left Behind* Act (*NCLB*), represented continued

efforts on the part of the federal government to reform America's public school system

(U.S. Department of Education, 2004). A response to stagnating achievement trends,

NCLB mandated high-stakes assessments with the intent of holding all schools

accountable for raising the bar in the areas of literacy and mathematics. This legislation

also required schools to monitor the progress of various subgroups – specifically, groups

of minority, low socioeconomic, or special education status – given the achievement disparity between these populations and the majority group (U.S. Department of Education, 2004). Across the country, schools responded with earnest efforts to implement reform initiatives designed to improve test scores and raise achievement.

One such initiative, *Making Middle Grades Work* (*MMGW*), called for the elimination of lower level courses and an increase in rigor in required, middle-level coursework as a means to raising student achievement (Bottoms & Murray, 2003). Essentially, the program called for detracking efforts combined with increased expectations and support for all learners. According to the Southern Regional Education Board, *MMGW*'s parent organization, (2009) middle grades students are not being prepared for rigorous, college-preparatory work at the high school, and high school students are not graduating with the skills critical for success in college and the workplace. Structural reorganization and an increase in curricular rigor were offered as possible solutions.

Inherent to the tenets of this *Making Middle Grades Work* reform was a rejection of traditional tracking structures. Tracking has long existed as a convenient mechanism for sorting and selecting students according to perceived ability (Jones, Spade, & Vanfossen, 1987), or as charged by its critics, as a system used to maintain educational disparity, often along socioeconomic or racial lines (Gamoran, 2009). Decades of research has suggested that this organizational structure has done little to address effectively the diverse learning needs of homogenously arranged groups, as it has been intended (Gamoran, Nystrand, Berends, & LePore, 1995; Kerckhoff, 1985; Kulik &

Kulik, 1982). Instead, tracking has been accused of exacerbating achievement gaps

between populations with diverse demographics (Oakes et al., 1990).

Midwestern School District, a large suburban school system outside of Kansas

City, Missouri, adopted the principles of *MMGW* and its high school counterpart and

responded with a comprehensive reorganization of course offerings at both the middle

and high schools. Lower level tracks were eliminated, and opportunities for greater

numbers of students to take more rigorous, advanced versions of grade level core classes

were offered. However, no research has been conducted in the district investigating the

effectiveness of this detracking effort on improving student achievement in the area of

communication arts.

Purpose Statement and Research Questions

As stated in previous chapters, the purpose of this study was to determine whether

a difference existed in communication arts growth among groups of students enrolled in

one of four curricular paths. The second purpose was to determine whether a difference

in growth was affected by ethnicity or gender. Research questions guiding the study

focused on communication arts growth, as measured by the MAP, between sixth and

seventh grade, seventh and eighth grade, and sixth and eighth grade for each curricular

path.

Review of the Methodology

This quantitative quasi-experimental study examined the dependent variable of

communication arts growth, measured by the communication arts portion of the MAP, as

affected by the independent variables of curricular path, gender, and ethnicity. The

population was comprised of one cohort of MSD students enrolled in sixth, seventh, and

eighth grade between the years of 2006 and 2009. Of this group, 1,062 met further criteria established for inclusion in the study: not only were they enrolled in sixth through eighth grade during the 2006 – 2007 through 2008 – 2009 school years, these students were also enrolled in one of the four identified curricular paths and had complete and accessible demographic and assessment records. The four curricular paths were determined according to the varied course offerings at the middle school, as all students experienced the same grade level curriculum in sixth grade. Students in Group 1 continued to take the grade level curriculum in both seventh and eighth grade; Group 2 was enrolled in the grade level curriculum in seventh grade but moved into the new Advanced Studies course in eighth grade; students in Group 3 were in the gifted course (*ACE*) in seventh grade before moving into the Advanced Studies program the following year; and Group 4 students moved from *ACE* into the standard grade level course in eighth grade. Both achievement and demographic data were collected by a MSD computer technologist and organized into a Microsoft Excel workbook before being uploaded into IBM® SPSS® Faculty Pack 21 for Windows. Data were analyzed using factorial analysis of variance (ANOVA), and when warranted, a post hoc analysis was completed using Fisher's Least Significant Difference.

Major Findings

Overall, the findings suggest that MSD's efforts to increase achievement by offering rigorous coursework to an expanded population of students during their eighth grade year did not produce the desired result. There were no statistical differences among the mean growth for students enrolled in various paths between seventh and eighth grade, the year curricular programming changed. Additionally, there were no

statistical differences among the growth means between sixth and eighth grade,

suggesting that the varied curricular offerings available to students during their middle

school years produced no meaningful difference in academic growth. However, Group 1

and Group 4 mean growth was statistically different between sixth and seventh grades.

Both groups were offered the grade-level communication arts curriculum in sixth grade

as MSD elementary schools did not offer formal curriculum differentiation via leveled

courses. In seventh grade, however, the educational path of these two groups diverged:

Group 1 continued to take a traditional grade level course while Group 4 enrolled in an

ACE course designed for a small population identified by the district as gifted. Given the

clear differences in curriculum, the differences in achievement on the MAP may be

explained. It also may be important to note that Group 4 was a small sampling ($n = 7$)

due to its atypical curricular pathway (i.e., students moved from a gifted seventh grade

course to a grade level course in eighth grade). This finding suggests that some *ACE*

students significantly outperformed some peers enrolled in the grade level course. Given

the curricular organization at the time, the findings suggest the traditional structure of

gifted and grade level course offerings benefitted a small population of advanced

students.

The demographic groups examined, ethnicity and gender, provided different

results. There existed no significant differences among the mean growth between White

and Non-White students during any span of time examined, suggesting in this study,

ethnicity did not affect any variance in growth. The third dependent variable of gender,

however, did produce significant findings. Between sixth and seventh grade, males

enrolled in the traditional gifted course (*ACE*) outperformed their female counterparts

almost four to one, indicating that males were more affected by this tracked gifted curriculum. Across groups, males in the gifted course (Group 3) and some males in the grade level course (Group 2) grew more than some males in the grade level course (Group 1). The implications of this are not entirely clear: while Group 3 males were enrolled in the gifted communication arts class, males in both Group 1 and 2 were enrolled in the grade level course. Again, the difference in curriculum rigor may account for differences between Group 3 and Group 1 but does not explain the difference between Group 2 and Group 1 males. Considering the curricular context of these findings, this data suggest that the traditional tracked structure again proved beneficial for some groups of students, specifically, males enrolled in the gifted curriculum and some males enrolled in the standard, grade level curriculum.

While no other tests yielded statistically significant findings, differences in growth means between and among genders between seventh and eighth grade did produce results requiring additional examination. Interestingly, student growth between seventh and eighth grade across all curricular paths for both genders was consistently and noticeably greater than the growth realized by the same groups between sixth and seventh grade, suggesting factors other than curricular placement might have impacted student growth (though this was not a tested hypothesis). No less, during the period between seventh and eighth grade, all females enrolled in the new Advanced Studies course (regardless of their curricular placement in seventh grade) grew more than males who had taken the gifted course the previous year and were now also enrolled in the new Advanced Studies course (Group 2). Based on this observation, females seemed to benefit somewhat more than males from the new detracked course, though again,

differences in growth means were not considered statistically significant. In the male population, the biggest increase in growth occurred in Group 1, the group of students who remained in the grade level course. These combined findings seem to suggest the new eighth grade Advanced Studies course was potentially not as advantageous for males given they did not experience the same growth as females in the same course or even males in the grade level course.

<div align="center">Findings Related to the Literature</div>

Summarizing decades of tracking research, Gamoran (1999) asserted, "the weight of the evidence indicates that tracking tends to exacerbate inequality with little or no contribution to overall productivity" (p. 4). Slavin (1990) only partially concurred, suggesting that disparities amongst diverse ability, race, and socioeconomic groups were, instead, the product of varied teaching methodology (rather than a tracked curriculum). The current study supports both of these positions in that comparisons of growth across varied curricular paths revealed almost no differences as students seemed to grow at a comparable rate. The only exception was one significant difference between a small group of students enrolled in the gifted course and a group of students enrolled in the grade level course between sixth and seventh grade. In that case, students seemed to benefit from a high-level tracked course more than the standard, grade level course. This one example of inequality, favoring high ability students, is also consistent with the literature (Kerckhoff, 1985; Kulik & Kulik, 1982).

The research on detracking offers contradictory findings. While some settings have eliminated tracked courses in favor of a single, rigorous alternative with great success (Burris & Garrity, 2008), other organizations have seen no meaningful

improvement in student achievement (Allensworth et al., 2009), while still other researchers have noted detrimental effects for certain populations of students (Loveless, 1999). The current study supports the latter two scenarios: when traditional "high" and "average" courses were eliminated, grade level courses were evaluated to ensure an appropriately challenging curriculum, and a new advanced offering was made available to a much larger population of students, no significant improvement was found for any one group of students.

The body of literature discussing the impact of tracking on minority populations is fairly consistent in its findings. While minority students with a socioeconomic and achievement background similar to their white peers are just as likely to enroll in higher-level courses, the convergence of poverty, race, and lower test scores work to the detriment of some minority students who find themselves in lower track courses (Lucas, 1999). Perhaps because there was no large disparity in minority representation across curricular paths, there were no significant findings suggesting ethnicity affected communication arts growth. On the surface, the study reported here does not support research connecting tracking with widening achievement gaps between minority and white students. However, given the complex social labyrinth affecting achievement, including race, socioeconomic status, track placement, and possible other factors, it is likely that the demographic characteristics of the sample in the MSD study were not diverse enough to reproduce results realized on a much larger scale.

Again, the evidence from detracking studies, especially those involving achievement effects on minority populations, has proven inconsistent and inconclusive. While some detracking efforts have resulted in gains in achievement for minority

populations (Alvarez & Mehan, 2006), others have not. This study found no significant effects within the traditional tracked structure or within the new "detracked" system, supporting Slavin's (1990) assertion that course organization – tracked or detracked – has little effect on achievement.

The limited literature on tracking and gender and insufficient research on detracking and gender provide very little insight regarding their combined effect on student achievement. However, within a mathematics context, Hallinan and Sørensen (1987) found no effect of gender on achievement in tracked settings. It is in this particular area that the current study produces interesting, albeit not all statistically significant, findings that at least challenge existing research. Between sixth and seventh grade, males in the gifted, higher level course (Group 3) grew more than their gifted female peers and some of their grade level male peers (Group 1), suggesting that, at least for high ability/track students, males tended to be more successful in a tracked setting. The following year, when the advanced level was expanded to include a somewhat more heterogeneous group of students, this same group of males (Group 3) produced smaller growth means than these same two comparison groups. While means between seventh and eighth grade were not considered significant, these findings do raise questions regarding the effect of curricular programming on gender.

Conclusions

The last section of this chapter offers a final commentary on the study. This section includes implications for action, recommendations for future research, and concluding remarks.

Implications for Action

As noted in chapter one, middle level students are not leaving middle school prepared for a rigorous college preparatory high school curriculum; in fact, many are falling behind rather than rising to meet new elevated standards, and school districts across the country have been charged with initiating improvement measures in order to stimulate achievement growth. In the current study, district officials implemented a detracking plan at the middle level, eliminating traditionally leveled courses in favor of increased access to more advanced coursework for more students. The findings suggest that communication arts growth was not significantly affected by this restructuring effort. Though not necessarily the results intended by the district, these findings do provide direction for future action.

If, indeed, quality of instruction accounts for noted discrepancies in achievement between various groups (Gamoran et al., 1995), MSD must continue to refine the formal curriculum of both the grade level and Advanced Studies courses, articulate expectations regarding teaching methodology, and systematize sound assessment practices to ensure the effective delivery of curricular programming. Teachers need meaningful professional learning opportunities, especially given the critical role of instruction. Students who moved from the grade level course into the Advanced Studies course did not experience growth statistically different from peers who remained in the grade level course. If student growth is not accelerated by enrollment in the advanced course, the course's purpose and very existence should be called into question by district leadership. While effective delivery of the prescribed curriculum was identified as an assumption for the

purpose of this study, district administrators must continue to monitor implementation to ensure the formal written curriculum is also the taught curriculum.

As noted by researchers (Oakes & Lipton, 1992; Rubin, 2006), effective detracking must address more than logistical components (e.g., budgets, staffing, or scheduling). While these are certainly critical considerations, effective reform initiatives are more often the result of significant shifts in fundamental beliefs about teaching and learning leading to changed practices that eventually alter the culture of an organization. In its curricular reorganization, MSD attended to many essential aspects such as curriculum development and resource identification, enrollment guidelines, staff allocation, and communication with stakeholders (MSD middle school teacher, personal communication, February 28, 2013). However, little time and effort was devoted to the development of a culture to support and sustain the significant change (MSD middle school teacher, personal communication, February 28, 2013). The success of the Advanced Studies program in achieving its charter goals is dependent upon the foundational beliefs, attitudes, and practices that support it; MSD must address these important elements as part of its improvement initiatives.

Finally, school district officials in MSD and other districts undergoing similar restructuring programs should consider possible differences between the educational experience of males and females within more heterogeneous advanced courses (in this case, the Advanced Studies course). Based on findings, males enrolled in the gifted and then Advanced Studies class went from outperforming peers (as measured by mean growth scores) to seemingly being outperformed by many of the same peer groups one year later. While the existing body of research offers little direction in this area, the

results of this study suggest MSD leaders should examine current practices to determine the effect of gender. This, in addition to increased professional support for classroom instruction and purposeful development of cultural elements required to sustain significant change, must become the agenda of the future for MSD.

Recommendations for Future Research

While this study examined the communication arts growth of students enrolled in various middle school curricular paths during a course reorganization initiative in a suburban, Midwestern school district, thereby adding to the body of literature on tracking and detracking, additional research may be needed due to limited or mixed results. Recommendations include:

1. Replicate the current study with additional cohorts of MSD students across a wider grade span over a period of years to examine the longitudinal effectiveness of the Advanced Studies program.

2. Replicate the current study in other districts undergoing similar detracking initiatives to discover whether findings are comparable.

3. Conduct qualitative analyses of MSD culture using interviews, observations, and focus groups to examine both beliefs and practices as they relate to the district's philosophy underlying the shift in curricular programming.

4. Include additional independent variables such as socioeconomic status to examine additional components that might affect students' communication arts growth.

5. Include additional dependent variables such as student growth in other Advanced Studies curricular areas (e.g., mathematics, science, or social

studies) to evaluate the effectiveness of the curricular restructuring in other

disciplines.

Concluding Remarks

This study examined communication arts growth of students enrolled in one of

four identified curricular paths during a district-wide detracking initiative. Data were

also analyzed to determine whether student growth was affected by ethnicity or gender.

Findings revealed no significant differences in growth amongst students in varied

curricular paths after the year of course restructuring. While ethnicity had no effect,

gender did affect differences in growth. Specifically, males enrolled in the traditional,

gifted track grew more than their peers grew but seemed to fall behind (in terms of

growth means) those same peers the following year when the advanced course was

restructured to include a more heterogeneous population. Conversely, males enrolled in

the grade level course throughout middle school experienced notable growth during their

eighth grade year, the year of restructuring.

The district's attempt to improve student achievement through the elimination of

traditional tracks and increased academic rigor was a largely formal process focused on

the logistics of restructuring and did not yield the desired results. Considering the

emphasis placed on the critical role of culture in supporting such an initiative, MSD and

other districts involved in detracking efforts may need to address paradigms regarding

ability and achievement if such efforts are to succeed.

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APPENDICES

APPENDIX A: REQUEST FOR PERMISSION TO CONDUCT RESEARCH

Document Provided to Intended Researcher by:

Signature_____   Date_____
(Building Principal for District Employee
or SLC Staff for Out-of-district Researchers)
_____

INSTRUCTIONAL OPERATIONS TEAM

██████████████████████

███████████████

REQUEST FOR PERMISSION TO CONDUCT RESEARCH/GATHER DATA
IN THE ████████████████ SCHOOLS
TO MEET A COURSE REQUIREMENT

DIRECTIONS: The applicant should complete this form, obtain the necessary
                        approval and signatures, and return to:
                        Associate Superintendent of Instruction & SchoolLeadership

████████████████████████████

It may take up to three weeks for requests to be processed; please plan accordingly in
order to meet course deadlines.

1. **Please describe concisely the basic concepts and goals of your proposed
   project, and include an explanation of how the project meets a course
   requirement within the field of education.**

   This clinical research study is in partial fulfillment of the degree of Educational
   Doctorate awarded by Baker University.

   The purpose of this research is to investigate the impact of the advanced studies
   language arts curriculum on communication arts achievement as determined by
   MAP results and SRI scores. The study will evaluate 6th, 7th, and 8th grade scores
   of one cohort of students divided into three groups:

	Group A	Group B	Group C
6th Grade **2006-2007**	Grade level curriculum	Grade level curriculum	Grade level curriculum
7th Grade **2007-2008**	Grade level curriculum (LA 7)	Grade level curriculum (LA 7)	Gifted curriculum (ACE LA 7)
8th Grade **2008-2009**	Grade level curriculum (LA 8)	Advanced Studies curriculum (AS LA 8)	Advanced Studies curriculum (AS LA 8)

Achievement data will be examined to determine growth trends across three years (2006-2007, 2007-2008, 2008-2009) *within* each group to make an overall comparison. This data will also be analyzed to determine the relationship between growth and gender/ethnicity.

2. **List the names of all data collection instruments you intend to use and enclose a copy of each with this application. Also, enclose a copy of each parent/student consent form. Please describe in detail the distribution, implementation, and collection methods you intend to use in your data collection.**

It will not be necessary to use a data collection instrument in this study. Data collected will include Communication Arts MAP test and SRI scores over a three-year span as well as demographic information. Pearson Inform and PowerSchool will be utilized to gather this data.

3. **Give the names of the ▮▮▮▮▮▮▮▮▮ School District public school(s), you intend to involve to meet the project requirements. Are there certain demographics required for the project (ie: grade level, gender, etc.)**

The study will be conducted using data from all three middle schools in the ▮ ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮

Demographics required include student names (or some form of alternative identification in order to track each student across a three year period), enrollment status during 2007-2008 and 2008-2009 (language arts course), grade levels, gender, and ethnicity.

4. **What amount of time would be required of staff or students in ▮▮▮▮▮ schools in order to meet project requirements?**

Based on similar data collection processes used for other approved studies, it is estimated that approximately three (staff) man hours would be required to gather the requested data.

5. **Are there any other school records you would require (for example, achievement test scores or attendance?). If so, please provide a detailed explanation of your process to code such records to ensure confidentiality.**

Yes, the following information will be needed:
- Enrollment status (language arts course) for students in 7th grade in 2007-2008 and 8th grade in 2008-2009
- Communication Arts MAP test scores (scaled scores) administered in the spring of 2007 (6th grade class), 2008 (7th grade class), and 2009 (8th grade class)

- Fall and spring SRI scores administered during 2006-2007 (6th grade class), 2007-2008 (7th grade class), and 2008-2009 (8th grade class)

To maintain student anonymity, names may be coded. Middle schools will be identified anonymously as well, described only by general demographic information. There will be no comparison made between the three middle schools.

*Please note: this particular cohort has been chosen as they were impacted by the implementation of the advanced studies program between the 7th and 8th grade years of their middle school experience. Consequently, some of these students had the unique opportunity of experiencing both the ACE and advanced studies program. Others were offered a more rigorous curriculum during their 8th grade year (advanced studies) previously unavailable as they did not qualify for the gifted (ACE) curriculum.

6. **Give the name of each person who will enter the schools. For non-district employees, please provide existing background checks for individuals or a plan to ensure background checks are in place prior to entry in schools.**

   Lisa Janeway, ██████████████████ language arts instructor

7. **What is the date you wish to begin?** February 1, 2011

8. **By what date do you anticipate being finished?** December, 2011

9. **Please obtain the signature of your instructor responsible for this assignment and attach a copy of the assignment guidelines.**

   Signature: _____
   Position: Associate Professor & Ed.D. Program Coordinator
   University: Baker University

10. **Name of applicant:**

    Lisa Janeway
    13005 W. 131 St.
    Overland Park, KS 66213
    913-381-0916

    _____
    Signature

    _____
    Position/Status

    _____
    Date

CRITERIA FOR APPROVAL OR DISAPPROVAL

The approval or disapproval of requests will be made within the following general guidelines.

1. The only projects which will generally be approved are those which:
   a) contribute to the improvement of education in the ▮▮▮▮▮▮▮ Schools;
   b) contribute to the improvement of education in general.

2. Even within the above categories, studies will generally be disapproved if they:
   a) appear to infringe on the privacy of pupils, parents, or staff members;
   b) present a burden to pupils or staff members;
   c) threaten school-community relations in any way.

3. Research solely for a course requirement will be considered only for ▮▮▮ ▮▮▮▮▮▮ School District staff.

4. At any point in the research process, ▮▮ staff can terminate the study if determined necessary for any reason.

5. The ▮▮ School District reserves the right to access any results or product created as a result of projects conducted using ▮▮ students, staff, or facilities.

PARTICIPATION OF THE SCHOOLS

Generally, participation in any research study conducted by an outside agency or individual will be completely voluntary on the part of the principals, teachers, pupils and any other personnel involved.

APPENDIX B: APPROVAL TO CONDUCT RESEARCH

To Lisa Janeway/Instruction,██████████

██████████nistration/████   cc ████████ ███████████

02/14/2011 04:32 PM   ██████Classified/████████

bcc

Subject Follow-up from IOT

History: This message has been replied to.

Lisa-

We were able to talk in IOT about your data request and we have worked with technology to determine that we preliminarily think we can get you some of the data you are requesting. Here is what is available:

- We can get you a spreadsheet with the cohort's MAP scores for the 3 years--the students will be identified by a randomized number.
- We can get you the demographics of the students (using the same randomized number as an identifier)
- We can get you a listing of the comm arts courses that cohort was enrolled in (again using the same randomized number)
- We can get you SRI scores for the 2008-08 year only for the group (again using the same randomized number)

Each of these documents would be a separate document and you would need to find the best way to merge them (I'm guessing you could find a stats person at the university who is for hire for such work). There would have to be an understanding that no additional data requests could be added in the future for this group of students; this original data set would need to be with what you worked.

If, you think you will have enough with the above list to move forward with your project, please email me and we will set up a meeting with you, me , Dr. Andrews, and Jason Carter so you can outline exactly what your needs are to those who will be doing the data mining for you.

Thanks and please let me know!

████████

████████████████

Director of Assessment and Data Analysis

████████████████████████

APPENDIX C: IRB FORM
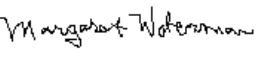
BAKER
UNIVERSITY
SCHOOL OF EDUCATION
GRADUATE DEPARTMENT

Date: November 15, 2012
IRB PROTOCOL NUMBER _____
(IRB USE ONLY)

IRB REQUEST
Proposal for Research
Submitted to the Baker University Institutional Review Board

I. **Research Investigator(s)** (Students must list faculty sponsor first)

Department(s) **School of Education Graduate Department**

   Name   Signature

1. Susan Rogers   _*Susan K Rogers*____,   Major Advisor

2. Margaret Waterman   _*Margaret Waterman*   Research Analyst

3. Dr. Trilla Lyerla   University Committee Member

4. Dr. Jeff Miller   External Committee Member

Principal Investigator:
Lisa Janeway   _____
Phone: 816-210-5924
Email: lisa.janeway@ ███████████
Mailing address: 13005 W. 131 St.
                 Overland Park, KS 66213

Faculty sponsor: Dr. Susan Rogers
Phone: 913-344-1226
Email: srogers@bakeru.edu

Expected Category of Review: __X__Exempt ___ Expedited ___Full

II: Protocol:

COMMUNICATION ARTS GROWTH AMONG MIDDLE SCHOOL STUDENTS
ENROLLED IN FOUR CURRICULUAR PATHS

Summary

In a sentence or two, please describe the background and purpose of the research.

The purpose of this study was to determine whether there is a difference in communication arts growth as measured by the Missouri Assessment Program (MAP) among groups of students enrolled in any of four curricular paths (see table below). The second purpose was to determine whether a difference in growth on the MAP was affected by gender or ethnicity.

Depiction of *Curricular Paths*

	Sixth Grade 2006 – 2007	Seventh Grade 2007 – 2008	Eighth Grade 2008 – 2009
Group 1	Grade Level	Grade Level	Grade Level
Group 2	Grade Level	Grade Level	Advanced Studies
Group 3	Grade Level	ACE (Gifted)	Advanced Studies
Group 4	Grade Level	ACE (Gifted)	Grade Level

This study was conducted in the ██████████████ School District (referred to as Midwestern School District throughout the study for anonymity purposes) using a student sampling from the three middle schools. Research related to a newly implemented program, Advanced Studies, has not yet been attempted; the findings of this study might offer some indication of effectiveness and/or direction for future action.

Briefly describe each condition or manipulation to be included within the study.

The independent variables of the study are curricular path (as illustrated in the table above), ethnicity (collapsed into minority and non-minority categories), and gender (male or female).

What measures or observations will be taken in the study? If any questionnaire or other instruments are used, provide a brief description and attach a copy.

The dependent variable, communication arts growth, is measured by a difference in scale score from sixth to seventh, seventh to eighth, and sixth through eighth grades on the Communication Arts portion of the Missouri Assessment Program (MAP). No questionnaires or other instruments will be used.

Will the subjects encounter the risk of psychological, social, physical or legal risk? If so, please describe the nature of the risk and any measures designed to mitigate that risk.

Subjects will not encounter any psychological, social, physical, or legal harm as a result of this study.

Will any stress to subjects be involved? If so, please describe.

Subjects will not be subjected to any form of stress in this study.

Will the subjects be deceived or misled in any way? If so, include an outline or script of the debriefing.

Subjects will not be deceived or misled in any way. All data collected is historical, so there will be no contact with subjects of any kind.

Will there be a request for information which subjects might consider to be personal or sensitive? If so, please include a description.

A request for information will be made to district leadership that includes only those pieces of data related to subjects' communication arts course progression, achievement levels, and demographics, specifically:
- a randomly assigned student number (for tracking purposes),
- communication arts course enrollment during sixth, seventh, and eighth grade,
- scale score on the sixth, seventh, and eighth grade Communication Arts portion of the MAP,
- gender, and
- ethnicity.

Again, individual data will be connected to a random number (no names will be provided), and all data will be kept strictly confidential.
.
Will the subjects be presented with materials which might be considered to be offensive, threatening, or degrading? If so, please describe.

No materials will be presented to the subjects for the purpose of this study.

Approximately how much time will be demanded of each subject?

No time will be demanded of the subjects.

Who will be the subjects in this study? How will they be solicited or contacted? Provide an outline or script of the information which will be provided to subjects prior to their volunteering to participate. Include a copy of any written solicitation as well as an outline of any oral solicitation.

The subjects of this study include one cohort of students enrolled in sixth grade during 2006 – 2007, seventh grade during 2007 – 2008, and eighth grade during 2008 – 2009. All data related to these subjects is archival, so no solicitation or contact is necessary. A request was submitted to and approved by the ███████ School District Instructional Operations Team (please see the approval letter as attached).

What steps will be taken to insure that each subject's participation is voluntary? What if any inducements will be offered to the subjects for their participation?

No subjects will be contacted for this study.

How will you insure that the subjects give their consent prior to participating? Will a written consent form be used? If so, include the form. If not, explain why not.

Written consent is not necessary as subjects will not be contacted.

Will any aspect of the data be made a part of any permanent record that can be identified with the subject? If so, please explain the necessity.

No data from this study will be made part of any permanent record.

Will the fact that a subject did or did not participate in a specific experiment or study be made part of any permanent record available to a supervisor, teacher or employer? If so, explain.

As only historical, archived data will be used for the purposes of this study, no data will be made part of any permanent record.

What steps will be taken to insure the confidentiality of the data?

Before delivery, a ███████████ district technologist will randomly assign a number to each subject's set of data to be used as an identifier only. As a result, all subjects will remain anonymous. Data will remain confidential, used only by the researcher for the purposes previously described.

If there are any risks involved in the study, are there any offsetting benefits that might accrue to either the subjects or society?

There are no risks involved in this study; however, several benefits may result. The statistical findings and resulting analysis will offer some contribution to the field in the area of increased student enrollment in advanced courses. Similarly, the findings of this study will provide relevant feedback (in the form of program evaluation) for the ████ ██████ School District.

Will any data from files or archival data be used? If so, please describe.

All data used in this study will be archival data, covering school years 2006- 2007 through 2008 – 2009. The data set will include:
- a randomly assigned student number (for tracking purposes),
- communication arts course enrollment during sixth, seventh, and eighth grade,
- scale score on the sixth, seventh, and eighth grade Communication Arts portion of the MAP,
- gender, and
- ethnicity.

APPENDIX D: IRB APPROVAL

August 24, 2011

Lisa Janeway
13005 W. 131st St.
Overland Park, KS 66213

Dear Ms. Janeway:

The Baker University IRB has reviewed your research project application (M-0118-0819-0824-G) and approved this project under Exempt Review. As described, the project complies with all the requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.

The Baker University IRB requires that your consent form must include the date of approval and expiration date (one year from today). Please be aware of the following:

1. At designated intervals (usually annually) until the project is completed, a Project Status Report must be returned to the IRB.
2. Any significant change in the research protocol as described should be reviewed by this Committee prior to altering the project.
3. Notify the OIR about any new investigators not named in original application.
4. Any injury to a subject because of the research procedure must be reported to the IRB Chair or representative immediately.
5. When signed consent documents are required, the primary investigator must retain the signed consent documents for at least three years past completion of the research activity. If you use a signed consent form, provide a copy of the consent form to subjects at the time of consent.
6. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.

Please inform Office of Institutional Research (OIR) or myself when this project is terminated. As noted above, you must also provide OIR with an annual status report and receive approval for maintaining your status. If your project receives funding which requests an annual update approval, you must request this from the IRB one month prior to the annual update. Thanks for your cooperation. If you have any questions, please contact me.

Sincerely,

Carolyn Doolittle, EdD
Chair, Baker University IRB

APPENDIX E: 2008-2009 ENROLLMENT GUIDE

<div style="border: 1px solid black;">

MIDDLE SCHOOL
COURSE DESCRIPTIONS

</div>

7th Grade Sample Schedule:
1) Eastern Hemisphere - Social Studies *Required*
2) Language Arts - Reading-Writing *Required*
3) Integrated Science *Required*
4) Mathematics *Required*
5) Physical Education *Required* / Alternating elective course
6) Health *Required* / Exploratory offering
7) Exploratory or elective offering

8th Grade Sample Schedule:
1) American History *Required*
2) Language Arts - Reading-Writing *Required*
3) Mathematics *Required*
4) Integrated Science *Required*
5) Physical Education *Required* / Alternating elective course
6) Exploratory or elective offering
7) Exploratory or elective offering

7TH AND 8TH GRADE *REQUIRED* COURSE DESCRIPTIONS

Communication Arts

Language Arts
Grade: 7   Credit: Full Year
Language arts curriculum consists of four major units of study: reading, writing, listening, speaking and information literacy. Each strand is accessed during one of three units. By reading a variety of materials, students will develop and apply strategies and skills to comprehend and analyze fiction and nonfiction. Working through the writing process, students will write effectively in various forms of writing, especially expository text. Students can also expect to develop and apply listening and speaking skills. Applying research process skills, student will gather, analyze, and evaluate a variety of media in the information literacy strand. Remediation of reading skills will be provided for selected students.

Advanced Studies Language Arts
Grade: 7   Credit: Full Year
This course parallels the content of the 7th grade Language Arts course with a more rigorous and in-depth focus on selected topics. This course will prepare students for Advanced Studies courses at the high school level.

Language Arts
Grade: 8   Credit: Full Year
Language arts curriculum consists of the following units of study: literature, writing, and grammar/usage. Students will continue to improve their reading skills by reading and studying a variety of literature forms: short stories, novels, poetry and drama. Students will analyze stories, apply the elements of literature, identify figures of speech, and develop critical thinking skills. The language arts curriculum will provide students with an opportunity to improve writing skills in sentences, paragraphs, short reports, essays and poetry. Reviewing and applying proofreading skills, capitalization, punctuation, spelling, grammar and usage will be included. Remediation of reading skills will be provided for students when appropriate.

Advanced Studies Language Arts
Grade: 8   Credit: Full Year
This course parallels the content of the 8th grade Language Arts course with a more rigorous and in-depth focus on selected topics. This course will prepare students for Advanced Studies courses at the high school level.

Social Studies

Eastern Hemisphere
Grade: 7   Credit: Full Year
This course studies the development of civilizations of the ancient eastern hemisphere. Content themes include: government, religion, geography, technology, social structures and economics. Emphasis will be given to Africa, the Middle East, Europe and Asia.