

THE BELIEFS AND ATTITUDES OF ADMINISTRATORS REGARDING THE
ACCELERATION OF GIFTED ELEMENTARY STUDENTS IN THE STATE OF
MISSOURI

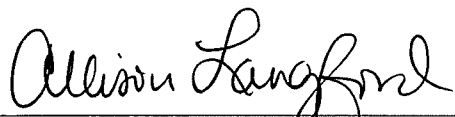
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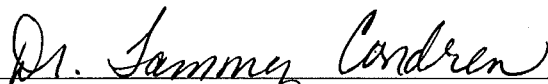
The undersigned, approved by the Department Chair of Graduate Studies in Education, have examined a dissertation entitled:

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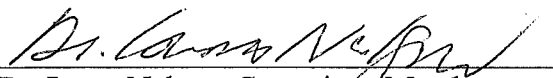
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THE BELIEFS AND ATTITUDES OF ADMINISTRATORS REGARDING THE
ACCELERATION OF GIFTED ELEMENTARY STUDENTS IN THE STATE OF
MISSOURI

A Dissertation
Presented to
The Faculty of the Graduate Education Department
Southwest Baptist University

In Partial Fulfillment
of the Requirements for the Degree

Doctor of Education

By

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April 2016

ACKNOWLEDGMENTS

This journey to my Ed.D. would not have been possible without three important individuals, my committee. Dr. Allison Langford, my committee chair has been my mentor through this dissertation process. Her guidance and advice has been a compass for me along the way. In addition, Dr. Tammy Condren has provided wisdom and insight throughout the process, as well as in the doctoral coursework. Finally, Dr. Laura Nelson, who I am fortunate to work with each day and who guided me to study the topic of acceleration more deeply. Also, a special thanks to Dr. Jim Truelove, who assisted me with my statistics and guided me back on track when I veered off the path.

My love for learning was fostered early by my parents, Marilyn Sidden and the late Dick Sidden. Their love and support through each of my accomplishments encouraged me to continue to learn and grow. Their sacrifice so that I could be a first generation college graduate was foundational in my achievements today.

I could not have completed this degree without the three most important people in my life beside me. Davis and Claire, you are the reason I made the choice to finally pursue this dream. Your patience and understanding as I spent hours away from you are recognized. I hope this will inspire you to follow your dreams, and to know that you can do anything if you set a goal and make a plan. Lastly, to my husband David, thank you for taking up the extra challenges while I was focusing on coursework. Your support and encouragement along the way have been inspirational. I'm so glad we are on this journey of life together and look forward to the next chapters.

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Abstract

Appropriately meeting the needs of gifted students by implementing research-based practices is a challenge for public education. According to Davis and Rimm (2004), gifted students are a unique group of learners who have a higher intellectual ability or creativity than their same-age peers. Implementing research-based practices is an important issue to consider when educating gifted learners. Three research-based practices of gifted education are acceleration, enrichment, and ability grouping. Studies have been conducted which determine the effectiveness of each of these practices, including John Hattie's (2009) meta-analysis. His research showed acceleration was the most effective practice, with an effect size of .88. Colangelo, Assouline and Gross (2004) defined acceleration as an intervention that progresses students through their educational program at a quicker rate or a younger age.

A Nation Deceived (2004) was written over a decade ago. This publication resulted in new attention to the programming of gifted students in this country, specifically regarding acceleration and its cost effectiveness and benefits in educating gifted learners. However, acceleration is not a universally used intervention, and research is being conducted as to why. There is limited research in the state of Missouri regarding research based gifted education practices.

This quantitative research study focused on the practice of acceleration in the state of Missouri and examined administrator attitudes and beliefs regarding acceleration. Statistically significant differences were found in both the research based gifted practices scale and the acceleration scale. Significant differences were found in the gifted practices scale between districts with a state approved elementary gifted program in the practices

of grade skipping, curriculum compacting and ability grouping. Significant differences were found in the acceleration scale in the demographic factors of level of education, district size, district location, and position. After analysis of the data, it could be concluded that administrator attitudes toward acceleration were not positive in the state of Missouri and that acceleration was the least occurring research based practice in the state. The occurrence of acceleration is similar to the number of districts with acceleration policies and procedures. There was a great variance in perceptions about the practice of acceleration. There was also a frequency of neutral responses that shows a hesitation or lack of knowledge toward some ideas about acceleration, including the research supporting acceleration. The Missouri Gifted Advisory Council recommendation to require districts to develop an acceleration policy may spur administrators in the state of Missouri to be aware of the research behind the practice of acceleration. The advisory council should provide models and research about the practice of acceleration, as well as the potential financial benefits of the practice.

CHAPTER ONE

INTRODUCTION

Appropriately meeting the needs of gifted students by implementing research-based practices is a challenge for public education. According to Davis and Rimm (2004), gifted students are a unique group of learners who have a higher intellectual ability or creativity than their same-age peers. Implementing research-based practices is an important issue to consider when educating gifted learners. Three research-based practices of gifted education are acceleration, enrichment, and ability grouping. Studies have been conducted which determine the effectiveness of each of these practices, including John Hattie's (2009) meta-analysis. His research showed acceleration was the most effective practice, with an effect size of .88. Colangelo, Assouline and Gross (2004) defined acceleration as an intervention that progresses students through their educational program at a quicker rate or a younger age. Phillips (2008) stressed the best way to equitably group students is by individual achievement and ability across age levels. The Institute for Research and Policy on Acceleration (2009) developed a guide for school districts regarding the development of acceleration policies and procedures. These recommendations were developed to assist districts in meeting the challenges presented by gifted education.

In 1973 Missouri state law authorized gifted education (Advisory Council on the Education of Gifted and Talented Children, 2015). Missouri established the State Assisted Gifted Program during the 1974-1975 school year, with seven school districts participating. Over the next several years, gifted education through the partially state funded model grew. By the 2005-2006 school year, 295 school districts participated in

the State Assisted Gifted Program. During that year, gifted education funding was rolled into the foundation formula, and districts were only required to identify gifted students to continue to receive the funding. Since that time, the number of districts has declined, with 231 school districts during the 2013-2014 school year offering gifted education services. A recent change in the definition of gifted education program has resulted in an increase in recognized gifted programs, with the inclusion of advanced placement and international baccalaureate programs as gifted education. During the 2014-2015 school year, there were 475 school districts that met the new criteria as having a gifted education program (Advisory Council on the Education of Gifted and Talented Children, 2015).

Unlike other states that require school districts to develop gifted education programs, Missouri has no law requiring school districts to do so. There are seven models recognized by the Missouri Department of Elementary and Secondary Education (Advisory Council on the Education of Gifted and Talented Children, 2015). Two of these models, Advanced Placement and International Baccalaureate, are also recognized as acceleration (Colangelo et al., 2004). The other five models are based on program design, rather than actual procedure and practice. These five models require a certified teacher of the gifted to be employed by the school district. The five models include Resource Room Teacher (RRT), Educational Resource Teacher (ERT), Special Class Teacher (SCT), Gifted Resource Teacher (GRT) and Programs for Exceptionally Gifted Students (PEGS) (Christian, 2008).

The gifted education models have inconsistent levels of effectiveness. In a program review of gifted education in Missouri, Christian (2008) evaluated the effectiveness of the different program delivery models. In this study the researcher

determined the type of program delivery model by the districts produced contradictory results. The researcher also found school districts were not consistent across the state in identifying what program delivery model they were offering, so it was difficult to draw conclusions based upon an analysis of program delivery models (Christian, 2008).

The history and current status of gifted education in the state of Missouri is important background for this study, because little research has been conducted in this state pertaining to gifted education. While program delivery methods are defined, there is no data regarding the implementation of research-based gifted education in Missouri.

Problem Statement

A Nation Deceived (2004) was written almost a decade ago. This publication resulted in new attention to the programming of gifted students in this country, specifically regarding acceleration and its cost effectiveness and benefits in educating gifted learners. However, acceleration is not a universally used intervention, and research is emerging on the topic. Guilbault (2009) studied the use of acceleration in Florida schools and discovered inconsistencies existed across the state and across districts regarding the implementation of acceleration policies and procedures. There is limited research in the state of Missouri regarding research-based gifted education practices. This researcher focused on the practice of acceleration in the state of Missouri and examined administrator attitude and beliefs regarding acceleration.

Purpose of the Study

The purpose of this study is to investigate the acceleration policies, procedures, practices, beliefs, and attitudes regarding acceleration in school districts in Missouri. The policy, procedures, and practices will also be examined regarding the connection to the

recommendations set forth by the Institute for Research and Policy on Acceleration. Information from administrators across the state of Missouri regarding beliefs and attitudes centered on acceleration practices will also be gathered. This information can then be used by educational advocates to inform educational decision makers at the state and district level about the practice of acceleration, the beliefs of educators, and professional development needs.

Conceptual Framework

Acceleration is defined as gifted programming that results in advanced academics at a younger age (Colangelo et al., 2004). This concept is the basis for the research of this study. Through the work of the University of Iowa surrounding this subject, researchers discovered acceleration is one of the most underutilized methods of gifted instruction. However, research also revealed it is one of the most effective methods of gifted instruction (Hattie, 2009).

In the overall school setting, administrator attitudes influence their leadership approach, and the impact of these attitudes on student achievement is extensively documented (Reeves, 2009). Research has found teacher attitudes toward acceleration were positive (Siegle, Wilson, & Little, 2013). Because administrators have positional power to change acceleration policy and practices in their schools, this study is designed to examine their beliefs regarding acceleration.

Research Questions

In order to meet the purpose of this study, the overarching research question is “What are the perspectives of administrators in the state of Missouri regarding the

acceleration of gifted students?” Additional questions that support the overarching question are as follows:

- a. What concerns regarding acceleration are similar across the state of Missouri?
- b. What impact do administrator concerns in regard to acceleration have on practice in their school?
- c. Is there a significant difference between the beliefs of Administrators of gifted education in the state of Missouri who have state approved elementary gifted education programs and those who do not?
- d. Is there a significant difference in the practice of acceleration in school districts that have state approved elementary gifted programs and those who do not?
- e. Are there significant differences between administrators in the state of Missouri in their attitudes and beliefs based upon the demographic factors of years of experience, type of district and level of education?

Limitations/Delimitations/Assumptions

This study is limited to the school districts in the state of Missouri with a Department of Elementary and Secondary Education (DESE) approved gifted education program. This study will be dependent upon the self-reporting of administrators of gifted education who completed the survey. A key assumption and bias during this research process pertained to the role of the researcher as an administrator of gifted education programs. The researcher maintained objectivity about the research topic throughout the process by piloting the survey, using proven statistical methods and analyzing the data from the statistical methods.

Definition of Key Terms

The key terms of this study are defined as follows.

- *Acceleration*: an intervention that progresses students through their educational program at a quicker rate or at a younger age (Colangelo et al., 2004).
- *Ability Grouping*: grouping gifted students together often through a different curriculum than other typical learners (Hattie, 2009).
- *Enrichment*: activities designed to enrich or enhance the learning of gifted students (Hattie, 2009).
- *Gifted Education Administrator*: those individuals in Missouri school districts who have been identified by their district as the gifted program contact.
- *Gifted Learner*: a unique group of learners who have a higher intellectual ability or creativity than their same-age peers (Davis & Rimm, 2004).
- *State Approved Gifted Program*: school districts in the state of Missouri who use state guidelines for student identification and provide a minimum of 150 minutes a week of contact time for identified students with a certified teacher of the gifted (Advisory Council on the Education of Gifted and Talented Children, 2015).
- *Response to Intervention(RTI)*: RTI for gifted learners is a systematic problem-solving model that allows them to show mastery of the general curriculum, with tiered options to push them to the highest level of learning that is appropriate for the individual students (Bianco, 2010).

- *Professional Learning Communities*: a movement defined by a focus on learning, a culture of collaboration, and a focus on results (DuFour, DuFour, & Eaker, 2008).
- *Grade Based Acceleration*: grade based acceleration includes early entrance to kindergarten or first grade, whole grade acceleration, and other methods which shorten the time a student spends in the K-12 system (Colangelo et al., 2004).
- *Subject Based Acceleration*: at the elementary level, subject based acceleration includes in-class acceleration or curriculum compacting and subject matter acceleration (Rogers, 2004).
- *Ability*: an individual's innate cognitive capacity, or IQ (Assouline, Colangelo, Lupkowski-Shoplik, Lipscomb, & Forstadt, 2009).
- *Aptitude*: an individual's performance on an above grade level test (Assouline et al., 2009).
- *Achievement*: an individual's performance on grade level assessments (Assouline et al., 2009).

Summary

This chapter outlines the challenges facing gifted education today and research based practice of acceleration. The purpose of this study is to investigate the acceleration policy, procedures, practices and administrator beliefs and attitudes regarding acceleration in school districts in Missouri. Key terms found in this study are also defined.

Chapter II will review the relevant literature related to the topic of gifted education and acceleration. Chapter III describes the quantitative methodology of this

study, including the process of survey validation, piloting and survey sampling (Rambo & McCoach, 2012). Chapter IV presents the findings of the quantitative study, including inferential and descriptive statistical analysis. Chapter V includes the summary and implications of the study, including the findings of this study and how they add to the body of research regarding acceleration. Finally, further research recommendations are explained.

Chapter II

Review of the Literature

Introduction

This chapter reviews the body of literature on best practices in gifted education. This review of the literature includes information on the early gifted education theorists and practitioners in the field; current issues facing gifted education including research-based methods of gifted instruction; and finally, the practice of acceleration, including educator beliefs and policy considerations. This literature review is divided into three sections: early theorists, gifted education today, and the practice of acceleration.

The first section identifies two early theorists of gifted education, Leta Stetter Hollingsworth and Lewis Terman. Both of these theorists influenced the definition of gifted. Their work was also important in the development of models for instructing gifted students. Their early longitudinal research at the turn of the twentieth century is still relevant and affects gifted practices today (Davis & Rimm, 2004).

The second section focuses on gifted education today, the challenges facing gifted education, and research-based practices in gifted education. One of the challenges facing gifted education today is the standards based movement. The standards based movement has set a minimum proficiency for all students. Gifted education advocates are concerned resources are being diverted away from gifted programs to programs that serve those students who are not meeting proficiency (Moon, Brighton, Jarvis, & Hall, 2007). A second issue facing the field is the education of young gifted children. Researchers believe this could be one of the most underserved populations in education today, with a focus on the foundational basics in school at this age. Many young gifted children enter

school having already mastered the content (Walsh, Kemp, Hodge, & Bowes, 2012). A third issue facing gifted education is the need for systematic processes for ensuring the identification and provision of services for gifted students (DuFour et al., 2008). The fourth issue is ensuring the fidelity of implementation of research-based gifted education practices (Renzulli, 1992). Research-based gifted education practices include enrichment, ability grouping, and acceleration (Hattie, 2009).

The third section expands on the practice of acceleration. John Hattie, in his meta-analysis of research, found acceleration to have an effect size of .88 (Hattie, 2009). This highly effective practice has received revived attention over the past decade.

Acceleration can be broken down into two main categories: subject specific acceleration and also whole grade acceleration (Rogers, 2004). In addition to describing the types of acceleration specific to elementary age students, this section will review the research conducted centered around educator beliefs. Identified barriers and myths, along with other issues that prohibit the implementation of acceleration will be addressed (Colangelo et al., 2004). Finally, this section will address the nature and need for acceleration policies and procedures (Institute for Research and Policy on Acceleration, 2009).

Early Theorists of Gifted Education

In a historical study, Jolly (2005) identified major contributors to the modern day practice of gifted education, including Leta Stetter Hollingworth and Lewis Terman. These theorists have influenced the definition of giftedness and the development of models for gifted education. Both of their works included the study of gifted students longitudinally. The purpose of their research was to develop a base of knowledge that developed practices “cultivating their abilities and then preparing them to serve society”(Jolly, 2005,

p. 17). The work of these two individuals continues to influence the contemporary issues facing the field of gifted education today.

Leta Hollingworth

Leta Hollingworth spent her career in the early 20th century supporting the education of gifted students in New York. This work, which spanned two decades, encompassed inventing strategies to teach, identify, and counsel gifted children. Hollingworth is also credited with developing a list of traits of gifted individuals through her research. Additionally, she is noted for writing the first textbook on gifted education, *Gifted Children their Nurture and Nature* (Jolly, 2007). She advocated combining enrichment activities with a moderate degree of rapid progress through school (Davis & Rimm, 2004).

In 1922, Hollingworth initiated a three-year longitudinal study of 50 gifted children, ages 8 to 10, enrolled in New York City Public School 165. The focus of Hollingworth's study was to develop methods for educating gifted students and to identify the characteristics of gifted learners. While this study ended after three years, Hollingworth continued her research independently and continued to evaluate these students for almost eighteen years (Klein, 2000).

In 1936, Hollingworth's vision for a special school for gifted children was realized. Hollingworth, in cooperation with New York Teacher's College, initiated the Speyer School project. Fifty gifted students were placed into two classrooms. Through this experiment, the "rapid learner curriculum" (Klein, 2000, p. 8) was developed. Hollingworth determined gifted learners were able to master a standard curriculum in approximately half of the time other children required and led her to state, "there is much

blind waste at present of these precious resources”(Hollingworth, 1936, p. 90). She advocated for enriching and accelerating the children for the other half of the time (Klein, 2000).

Hollingworth laid a foundation for best practices in gifted education. Her work is complemented by the work of Lewis Terman.

Lewis Terman

Lewis Terman, referred to by many as the “father of gifted education” (Davis & Rimm, 2004, p. 54), did much of the initial research in the United States by following 1000 gifted learners as they progressed from elementary school through adulthood. The majority of his research focused on the identification of gifted individuals. He also developed a working definition of giftedness (Jolly, 2008).

In addition to his research, Terman also offered suggestions for the education of gifted children. In one of his follow up publications, Terman (1939) defined central tendencies of gifted individuals. He also stressed there were “limitless possibilities” (p.89) in providing opportunities and accelerating students who are gifted. Terman’s work built a foundation for gifted education. His work still affects research studies and practices today (Jolly, 2008).

The early theorists of gifted education established a base of research and started a discussion about gifted education that has spanned over a century. The focus on gifted education in the United States has waxed and waned over the years, depending on the cultural climate. For example, during the Great Depression, there was a decline in the focus on gifted education. This “age of mediocrity” (Davis & Rimm, 2004, p. 4) was overcome in 1957 with the launch of the Russian satellite, Sputnik. The fear of being

outperformed by the Russians brought a new focus to gifted education in the United States. As a result, the research of the early theorists in gifted education was refreshed, and new research emerged related to the best practices in gifted education (Davis & Rimm, 2004). This research is discussed in the next section.

Gifted Education Today

According to Davis and Rimm (2004), the values of a culture determine the definition of “gifted” in that culture. In the United States, gifted and talented typically refers to those students who excel in the realm of academics. Cross and Coleman (2014) defined giftedness as a “combination of advanced development and creativity” (p.102). In addition, Joseph Renzulli (1992) developed a model of giftedness widely accepted today. This model defined giftedness as an interworking of three characteristics: above average ability, task commitment, and creativity. Meeting the needs of those individuals who are academically gifted has been an issue for schools in the United States for more than a century.

The remainder of this section focuses on the current issues impacting gifted education today and research-based methods of gifted instruction. The issues facing gifted education include the standards based reform movement, the education of young gifted children, the need for systematic approaches to intervening with gifted children, and the fidelity of implementation of research-based practices. The research-based methods of gifted education that will be discussed are enrichment, ability grouping, and acceleration.

Issues in Gifted Education

The focus on gifted education has gained momentum in the 21st Century; however, there continues to be issues that challenge researchers. These issues include the standards based reform movement, the education of young gifted children, systematic approaches to intervening with gifted students, and the fidelity of implementation of those interventions.

Standards based reform.

In 2001, No Child Left Behind (NCLB) set a minimum proficiency for all students, which led to rising concern that those academically advanced and gifted students were actually being left behind (Colangelo et al., 2004). In 2004 the Templeton Foundation published *A Nation Deceived*. This publication emphasized the gap between theory and practice regarding acceleration policies and practices for gifted learners (Colangelo et al., 2004). This study also shed light on the focus schools placed on lower performing students due to NCLB, thus shifting a focus off of gifted students and their needs. In addition, a qualitative research study in Virginia examined the impact of the standards based movement on gifted education (Scot, Callahan, & Urquhart, 2009). The researchers identified a theme that suggested the accountability movement had “created a barrier for practice and development of practice teaching and learning for gifted students.” (Scot et al., 2009, p. 50).

The standards based movement, with its heavy focus on testing, may cause frustration for gifted students. In a qualitative study (Moon, Brighton, Jarvis, & Hall, 2007), results indicated there was frustration among some gifted students regarding the expectation that all students should work at the same pace. Overall, the study revealed

the standards based movement created a ceiling for gifted students that decreased their opportunities to reach their academic potential (Moon et al., 2007).

Howley, Rhodes, and Beall (2009) stated the gifted students in rural communities tend to suffer in the standards based approach to education. This is due to limited resources available for gifted programs. The researchers also claim this is due to the focus on students “on the bubble” (Howley, Rhodes, & Beall, 2009, p. 527) by educators in rural schools who are attempting to meet the standards for all students with the limited resources they have been given.

The education of young gifted children.

The standards based movement and its impact on gifted education continues to be studied; however, the education of young gifted children is an area of additional concern. Researchers have claimed young gifted children are possibly one of the most underserved groups in education (Walsh, Kemp, Hodge, & Bowes, 2012). Many of the early primary school years of regular education focus on learning the basics, which many young gifted children have already mastered. Rotigel (2003) urged “gifted children deserve to learn something of value in school each and every day” (p.211). Clark (1997) noted gifted children need to be given the opportunity to understand themselves and experience positive education opportunities.

The regular education curriculum is designed to meet the needs of a typical student; therefore, many gifted students are forced to wait until their peers master the content. Some gifted children may even act out behaviorally if bored in the regular classroom. In an interview study with gifted children, the researchers discovered a central phenomenon around the concept of waiting: “Waiting is boring; sometimes,

waiting is fair” (Peine & Coleman, 2010, p. 239). In this research, they discovered gifted students reported already mastering the content being presented a majority of the time. The gifted learners shared their teachers ensured mastery of all learners before moving on, thus causing gifted students to wait, which they characterized as “boring” (Peine & Coleman, 2010, p. 240). Young gifted learners revealed they had learned to occupy their time with something else while waiting. For the majority of these students, this was reading. Finally, the gifted students acknowledged “waiting is fair” (Peine & Coleman, 2010, p. 240) because they understand all students have the right to master the same coursework. However, an additional theme the researchers uncovered was that students had the desire to “move ahead through the content at their own rate” (Peine & Coleman, 2010, p. 242).

Implementing appropriate methods of education for gifted learners is especially important. Some traditionally used practices, such as doubling up on work, peer tutoring, and cooperative learning, can be resented by the gifted learner. Implementing research-based practices such as acceleration, ability grouping, and enrichment opportunities for gifted learners is essential. Developing well-articulated and measurable goals for programs for young gifted learners is also a concern of researchers (Walsh et al., 2012).

Systematic processes.

A focus on systematic processes to ensure the learning of all students has been on the rise over the past several years. This focus is based on the research around professional learning communities and response to intervention. While both of these movements have primarily focused on students who have not mastered learning

objectives, there is also research that supports both movements for gifted learners (DuFour, DuFour, & Eaker, 2008).

Professional learning communities.

The professional learning communities (PLC) movement that arose out of the work of Dufour and Aiker, has begun to shed light on the focus on learning. PLC's are defined by a focus on learning, a culture of collaboration, and a focus on results (DuFour et al., 2008). Dufour proposed four questions that should be the focus of a PLC: "What do we want our students to learn? How will we know when they learn it? What do we do when they do not learn it? What do we do when they have already mastered the material?" (DuFour et al., 2008, p. 42)

The PLC movement influences gifted education with the focus on the final question. Through a systematic process, the researchers asserted the needs of high ability learners can be met through the answering of this question by collaborative teams. Dufour stressed teachers cannot forget the obligation of "challenging and stretching all students" (DuFour et al., 2008, p. 259) and educators must raise their expectation for student learning to include educating those who have already mastered the content.

Response to intervention.

A relatively new concept is the use of a response to intervention model in meeting the needs of gifted students. Bianco (2010) explained the possibilities of a response to intervention (RTI) model in providing research-based intervention for gifted learners. She stated this model relies heavily on Tier I general education classroom instruction. The research showed classroom teachers often are lacking the knowledge and skills to effectively differentiate instruction for gifted learners. Bianco (2010) also

concluded educators need training to identify gifted potential. The RTI model requires a systematic approach with clearly established protocols.

Buffam, Mattos, and Weber (2012) identified four guiding principles to ensure a quality RTI model. The first guiding principle is a collective responsibility for all learners, including students who have already achieved. This is achieved by ensuring the academic growth of all students. The second principle is ensuring concentrated instruction, which includes a “systematic process of identifying essential knowledge and skills” (Buffam, Mattos, & Weber, 2012, p. 15) for all students to master. The third principle is convergent assessment, which refers to the ongoing process of collectively analyzing evidence of student learning. The fourth guideline is certain access, described as a process that guarantees each student will receive the time and support the individual needs to learn at high levels. RTI for gifted learners requires a systematic problem solving model that allows them to show mastery of the general curriculum, with tiered options to push them to the highest level of learning appropriate for the individual students (Bianco, 2010).

Fidelity of implementation.

Renzulli (1999) noted his belief that poorly implemented practices is the primary problem in gifted education. While he contributed greatly to the modern day theories of giftedness, he believed the sharing of practical approaches to educating the gifted child should be the primary focus of research. “The best theories are of little value in an applied field of knowledge if they do not make sense by providing specific strategies and guidance to practitioners” (Renzulli, 1999, p. 31).

According to Ambrose, VanTassel-Baska, Coleman, and Cross (2010), the field of gifted education is fragmented, specifically regarding the use of research-based practices with fidelity. In addition to fidelity of implementation, the actual selection of implementation of a quality intervention to improve student outcomes is of utmost concern (Harn, Parisi, & Stoolmiller, 2013). The implementation and sustainability of evidence based practices are concerns gifted education shares with other educational programs. Buffam, Mattos, and Weber (2012) stated the essential elements of quality interventions are that they must be “research-based, directive, administered by trained professionals, targeted and timely” (p.98).

Gifted education is facing several issues that schools must address to effectively meet the needs of gifted learners. These issues include the standards based education movement, the education of young gifted students, systematic processes for intervening with gifted learners, and the fidelity of implementation of those interventions. Research-based instruction is essential and there are three methods of gifted instruction, which are discussed in the next section.

Methods of Gifted Instruction

Research regarding the various methods of gifted instruction is diverse. In 2009, Hattie conducted a meta-analysis of three gifted practices: acceleration, enrichment, and ability grouping. His research determined the effect size based on the previous research on all three topics. Hattie (2009) concluded an effect size of .40 was equivalent to a year’s worth of growth for a student; therefore effect sizes above .40 showed average growth past a typical year of growth (Hattie, 2009). Hattie determined the effect size for many research- based practices, including enrichment, ability grouping, and acceleration.

Enrichment.

According to Davis and Rimm (2004), enrichment strategies are those methods for achieving content and process goals. Hattie (2009) examined over 214 studies, and determined enrichment had an effect size of $d = .39$. Wallace (1989) found teacher experience was a key factor, with those with several years experience of teaching gifted students having greater effects ($d = .88$) than those with no or limited experience ($d = -0.06$).

Recent research on enrichment includes a study by Aljuhairman and Ayoub (2012). The authors examined the effect of an enrichment model on analytical, creative, and practical abilities in Saudi Arabia. The researchers determined enrichment affected each of the three abilities differently, with the highest effect on analytical ability due to the primary focus of the enrichment activities on analytical thinking. In addition, they discovered enrichment programs are flexible, can be easily implemented, and can be applied in classroom instruction to benefit all students (Alijughaiman & Ayoub, 2012). In a study focused on an enrichment curriculum in math, McAllister and Plourde (2008) did not provide quantitative data to show a positive or negative impact of an enrichment curriculum in mathematics. The researchers mentioned qualitative benefits of students being able to work on a project that meets their specific needs and learning styles (McAllister & Plourde, 2008).

With technology opening up classrooms to the world, there has been some recent research on the effectiveness of technology in providing for the needs of gifted students. Eckstein (2009) researched the use of technology in providing an enrichment model to students, specifically students in rural populations. In a study related to distance learning

for gifted students, Wallace (2009) explored the effectiveness of distance learning for gifted students and compared the outcomes for students at different age groups. Wallace stressed this model can be used for both acceleration and enrichment. Young gifted students can benefit from distance learning opportunities, provided their needs are taken into account. These needs include software usability, technical support, interest in subject, and the role of the teacher (Wallace, 2009).

Ability grouping.

The second research-based method of instruction for teaching gifted learners is ability grouping. According to Glass (2004), the ability grouping model allows gifted students to work with similar ability level. Gentry (2014) stressed grouping gifted learners by ability can effectively facilitate a variety of educational goals for gifted learners including enrichment and acceleration. This model also allows teachers to plan and differentiate instruction. In comparing 125 studies, Hattie (2009) determined this method of gifted instruction to have an effect size of $d = .30$. Hattie stressed ability grouping is different from high ability groups and should involve a curriculum aimed at challenging students and increasing the likelihood of success in engagement and learning.

Cluster grouping is another type of ability grouping. In a cluster grouping model, gifted learners are placed into a regular education classroom in “clusters” of five to nine identified gifted students, with the remaining students of average ability. In a study by Brulles, Saunders, and Cohn (2010), the researchers concluded student learning was at higher levels in the gifted cluster classrooms and cluster grouping is an effective model that allows gifted learners to be educated in mathematics at their ability level. In another study focusing on the effects of a tiered math curriculum paired with cluster grouping, the

researchers determined the cluster grouping model could promote academic gains for all students, including the gifted (Pierce et al., 2011).

Another form of ability grouping is a “flexible grouping” model in which students can move in and out of groups based on readiness and performance, which can change depending upon the skill being addressed (Gentry & Fugate, 2013). Formative assessment can be utilized to determine student group placement. The most recent research showed gains with ability groupings are greatest when ability grouping is implemented in partnership with a differentiated curriculum (Brulles, Saunders, & Cohn, 2010).

Acceleration.

The third research-based method of instruction for gifted learners is acceleration. Acceleration is the practice of allowing students with superior abilities to work on learning tasks that match their mental age (Hattie, 2009, p. 100). Hattie’s meta-analysis showed acceleration was the most effective in regard to influencing the outcomes for gifted students, with an effect size of $d = .88$. Terman’s studies discovered students who were allowed to accelerate according to ability had more success than those who were not allowed to do so. He also found those who did not have acceleration opportunities had difficulty in college due to poor work habits (Davis & Rimm, 2004). Terman (1936) noted the mission of a school should be to make the most of every student’s ability, including gifted individuals, and the possibilities are endless for increasing the outcomes for gifted students (p.87).

In their synthesis of research on the effects of acceleration, Kulik and Kulik (1984) revealed students who were accelerated a grade level did better than students of

their same age and ability. They also determined those students also did as well as older students in the higher grades. Gross (2006) confirmed this work in a longitudinal study in Australia. His research followed individuals with an IQ of 160 and above. His qualitative research uncovered radical acceleration, which included accelerating through multiple grades can provide structure to a placement that is appropriate for the individual with such a high IQ. Most recently Kretschmann, Vock, and Ludtke (2014) conducted research that supported these previous researchers.

The research surrounding gifted education is broad. This section focused on the issues impacting schools in educating gifted students and the research-based methods of instruction of gifted learners, which included enrichment, ability grouping, and acceleration. With an effect size of $d = .88$ (Hattie, 2009), acceleration is discussed more in depth in the next section.

The Practice of Acceleration and Issues Impacting Implementation

Hattie (2009) found acceleration is a highly effective method to educate gifted learners. It is important, however, to define acceleration practices. It is also important to examine the reasons why acceleration may not be widely implemented and the myths associated with acceleration. Recently, researchers have focused on educator beliefs regarding the practice of acceleration. There are also important considerations when developing acceleration policies that should be examined related to systematic processes and fidelity of implementation.

Acceleration Practices

Southern and Jones (2004) explained the various methods that can constitute acceleration. Rogers (2004) placed these in two categories: subject based acceleration

and grade based acceleration. At the elementary level, subject based acceleration includes in class acceleration or curriculum compacting and subject matter acceleration. Grade based acceleration includes early entrance to kindergarten or first grade, whole grade acceleration, and other methods which shorten the time a student spends in the K-12 system (Colangelo et al., 2004).

Subject-based acceleration.

According to Southern and Jones (2004), in-class acceleration includes continuous progress, self-paced instruction, and curriculum compacting. Continuous progress is when the student progresses through the content systematically as content is mastered. This becomes acceleration when the student's progress exceeds his or her same age peers. A form of continuous progress is self-paced instruction. Self-paced instruction is a strategy that allows the student to move through learning objectives at his or her own pace. Curriculum compacting is the practice of reducing the amount of instructor activities, drill, and practice with the time gained used for more advanced content instruction or enrichment activities (Southern & Jones, 2004).

Southern and Jones (2004) described subject matter acceleration as a strategy that allows students to be placed in classes with older peers (or materials from those classes) for a portion of the school day. Subject matter acceleration is typically in the area of the advanced learner's strength. The researchers reported the student may physically attend the class, or the student may receive differentiated instruction in the general classroom, which utilizes the higher-grade level materials (Southern & Jones, 2004).

In a review of the research of the academic benefits of acceleration, Rogers (2004) concluded subject based acceleration methods showed additional growth for gifted

students above that which they had already achieved. Studies surrounding compacted curriculum revealed an effect size of .83 in the area of mathematics achievement and .26 in the area of language arts. Rogers (2004) discovered growth continued each year curriculum compacting was implemented. Single subject acceleration had an effect size of .57 of additional growth beyond which the individual student already achieved. In addition, Rogers' research uncovered prior indicators, which could lead to possible academic success for those students who were subject accelerated. These indicators included achievement beyond of their peers, independence and motivation to learn, and an intense interest in the area of acceleration (Rogers, 2004).

Grade based acceleration.

Grade based acceleration refers to early entrance to school, whole grade acceleration, and other methods which shorten the amount of time a student spends in the K-12 system. Early entrance to school had an effect size of .49 when compared to students who were not admitted early (Rogers, 2004). Whole grade acceleration, also known as grade skipping, occurs when a student is placed in a grade placement above his same age peers. In her review of the research, Rogers (2004) determined there was a one-time jump of a half years' instruction, or $d = .49$, beyond which the student had already achieved when this method was deployed. Prior indicators of student success in an acceleration placement included achievement two or more grade levels above same age peers, individual student preference to fast paced instruction and challenging learning, and individual student independence in thought and action (Rogers, 2004).

Howley (2002) examined one school district that employed both whole grade and subject specific acceleration. The researcher found both approaches were effective,

resulting in achievement gains for elementary gifted students. In a meta-analytic study, Kulik (2004), discovered the achievement of younger students who were accelerated was over a grade level above same age peers who were not accelerated. In addition, the achievement of young accelerated children was equal to that of older peers who were not accelerated. Rogers (2004) concluded acceleration resulted in significant gains for student achievement, however the researcher also found individual student readiness for acceleration is critical.

Wells, Lohman, and Mallon (2009) conducted a study that analyzed two data sets that tracked cohorts of American students. The purpose of their study was to uncover predictor variables associated with whole grade acceleration and the long-term academic outcomes of students who were accelerated. The first database was the National Education Longitudinal Study, which included information on individuals who were in the eighth grade in 1988 and tracked their progress through high school. The researchers analyzed this database to determine the characteristics of students who were whole grade accelerated in elementary school and then analyzed the high school achievement of those students. The second database that was analyzed was the Educational Longitudinal Study (ELS). This database was composed of students who were 10th graders in 2002 and followed up with them when they graduated in 2004. The researchers were able to determine from these data sets the students who had been whole grade accelerated during the elementary school years and compare those outcomes to the student in their cohort who had not been accelerated. The researchers discovered girls were more likely to be accelerated than boys, however they found no difference in racial and ethnic groups who were accelerated. They did find students with higher socio-economic status were more

likely to be accelerated. Students who were whole grade accelerated in elementary school were more likely than their same age peers to be in high school gifted classes than their non-accelerated peers. However, students who were whole grade accelerated were not more likely to take AP coursework than their non-accelerated peers in their cohort (Wells, Lohman, & Marron, 2009).

Kretschmann, Vock, and Ludtke (2014) conducted a qualitative study in Germany on the effects of grade skipping on academic performance. This research supported earlier studies that acceleration results in an increase of academic achievement due to “a more suitable level of demand in school after students skipped a grade” (Kretschmann, Vock, & Ludtke, 2014, p. 1089). The researchers determined the young accelerated students had the same achievement as their older nonaccelerated peers (Kretschmann et al., 2014).

Long-term benefits of acceleration.

Research has shown that a student’s immediate academic needs can be met through acceleration, and there has also been research examining the long-term effects of acceleration. Lubrinski (2004) concluded the long-term effects of acceleration practices were positive for those individuals who had been accelerated. Steenbergen-Hu and Moon (2011) discovered the overall long term effects of acceleration were positive, with students who were accelerated outperforming nonaccelerated students on standardized tests, college grades, and degrees obtained. In a similar study, researchers found students who were accelerated a grade were more likely to enter a career in the science, technology, engineering, and mathematics (STEM) fields (Park, Lubinski, & Benbow, 2013).

Overall, the research strongly supports acceleration. However, there is some question as to which students should be accelerated and the factors that must go into an acceleration decision. The next section discusses the research and development of a decision making tool to assist teams in making acceleration decisions.

Guidelines for Considering Acceleration

The Iowa Acceleration Scale, 3rd Edition (IAS-3) was developed to guide educators and parents through a decision making process to determine if an individual child is an appropriate candidate for whole grade acceleration (Assouline, Colangelo, Lupkowski-Shoplik, Lipscomb, & Forstadt, 2009). However, the researchers who developed the scale also encourage teams that the scale can be used to make decisions about subject specific acceleration. The important factors identified by researchers to consider are academic ability, academic aptitude, and academic achievement. Other factors that the researchers have identified as important considerations in making acceleration decisions are school and academic factors, developmental factors, interpersonal skills, and the attitudes of the student, parent, and school regarding acceleration (Assouline et al., 2009).

Academic ability, aptitude, and achievement.

Assouline, Colangelo, Lupkowski-Shoplik, Lipscomb and Forstadt were the researchers involved in the development of the IAS-3. These individuals reported academic ability, aptitude, and achievement scores, while similar, were not the same. Each score represented an important factor to consider when making acceleration decisions. Academic ability, or IQ, is a good predictor of academic success for students; researchers have identified an IQ of 130 or above on an individually administered IQ

tests as an indicator of a student in need of consideration of acceleration (Assouline et al., 2009).

Academic aptitude is referred to as an individual's performance on an above grade level test. The researchers identified students at or above the 50th percentile on an above grade level assessment indicated readiness for that student to learn more challenging material (Assouline et al., 2009).

The developers of the IAS-3 defined academic achievement as an individual's performance on grade level material. The researchers identified performance at or above the 90th percentile on a grade level achievement assessment indicates a possible readiness for more challenging work. The IAS-3 combines the ability, aptitude, and achievement scores resulting in a single score that accounts for these three factors (Assouline et al., 2009).

School and academic factors.

The developers of the IAS-3 identified important school and academic factors that deserve consideration in acceleration decisions. These factors include grade placement considerations, attendance issues, and other academic issues. Grade placement considerations include the grade in which acceleration is being considered, with research supporting the early entrance to kindergarten or first grade to be the least disruptive both academically and socially (Robinson & Weiner, 1991). Another grade placement decision identified is whether the acceleration will also include a building change. Clinical experience of the researchers at the Belin-Blank Center found the support of the familiar adults and school environment provided an advantage to the student being accelerated (Assouline et al., 2009, p. 122). A final grade placement decision is when the

acceleration will take place. The developers of the IAS-3 indicated there is research to support that accelerations that take place during the middle of the school year allow the sending and receiving teacher time to collaborate and help the student make a smooth transition (Assouline et al., 2009).

There is significant research that shows consistent relationships between attendance and academic achievement. The developers of the IAS-3 take this important factor into account and it is a factor in decision making of whether to accelerate an individual student (Assouline et al., 2009). Student motivation and attitude toward learning are also important factors to consider. Students who are highly motivated and seek out new and rigorous academic challenges have a higher likelihood of being successful and ready for acceleration.

Developmental factor and interpersonal skills.

The researchers who developed the IAS-3 acknowledged developmental factors are important in the context of making acceleration decisions. These developmental factors include a child's age in relation to current grade placement, physical size, and motor coordination. This section has been weighted lower, because the developers urged these factors should only be considerations, not decision makers when considering acceleration for individual students (Assouline et al., 2009).

The developers of the IAS-3 urged the teams involved in decision making about acceleration should consider interpersonal skills in the decision making process. These skills include interactions with peers. Peers include other children the same age, both older and younger. In addition to peer relationships, it is important to consider relationships with adults. This section is also weighted lower than other sections. The

researchers urged the teams involved in decision making about acceleration should consider if interpersonal difficulties would be made better or worse by the decision (Assouline et al., 2009).

Attitudes towards acceleration.

The developers of the IAS-3 identified the attitudes of the student, parents, and the school are all important factors to consider in making acceleration decisions for individual students. The researchers stated it is important to consider the attitude of the student towards acceleration and an individual student should have a neutral to positive outlook about the acceleration opportunity (Assouline et al., 2009). The IAS-3 developers urged parental involvement and support are critical in the decision making process about whole grade acceleration. Finally, the researchers discussed the importance of the attitude and support of the school to the practice of acceleration (Assouline et al., 2009). This topic is discussed in detail later in this chapter.

Assouline et al. (2009) cautioned there are times in which acceleration is not recommended. First, acceleration is not recommended for students who have a sibling in the same grade in which the acceleration is being considered. This is to avoid any family conflicts. Secondly, acceleration is not recommended for any students whose IQ is not one standard deviation above the mean (115). The third reason the authors cautioned against acceleration is when the student does not want to be accelerated. The final caution is given regarding those students who might be interested in athletics and in later years would be competing against students older than they are (Assouline et al., 2009).

Educator Attitude and Beliefs

Research in recent years has shifted from the effectiveness of acceleration in providing academic gains for gifted students to studying the beliefs and attitudes of educators regarding the practice of acceleration. Researchers have discovered an individuals' attitudes and beliefs impact their day-to-day practice (Pajeres, 1992; Reeves, 2009; Senge, 2006).

Teacher attitudes and beliefs.

Pajeres (1992) urged educational researchers to focus on the beliefs of teachers. He purported the study of beliefs informed educational practice, because beliefs are connected to personal knowledge, which impact day-to-day instruction. He proposed researchers should infer beliefs by measuring the congruence among teacher belief statements, the educator's behavior, and the behavior related to the belief (Pajeres, 1992).

Overall, studies regarding teacher beliefs have supported the practice of acceleration (Daugherty, 2010; Gallagher, Smith, & Merrotsy, 2011; Siegle et al., 2013). Southern, Jones, and Fiscus (1988) discovered the teachers in their study raised concerns regarding social issues of gifted learners. Siegle et al. (2013) reported approximately one-fourth of the population surveyed in their research study expressed reservations about some aspect of acceleration. Educators were most concerned by social and emotional issues associated with acceleration and least concerned about academic issues surrounding acceleration (Southern, Jones, & Fiscus, 1988).

Misset (2014) revealed when teachers have access to and utilize formative assessments, the use of personalized pacing for their advanced students increased. The researcher also discovered when gifted teachers expressed beliefs and expectations that considered individual students, then those teachers utilized research-based practices in

the areas of ability grouping and acceleration. In a study of preservice teachers, Megay-Nespoli (2000) revealed teachers became more confident and positive about their attitudes towards gifted issues in general as a result of participating in training on differentiation.

Administrator attitudes and beliefs.

The beliefs and attitudes of administrators are equally important, if not more important, than teacher beliefs. In the book, *Activate*, the author urged educational leaders to be attentive to their own attitudes and beliefs so that they can change the outlook and perspective of the organization that they lead (Rose, 2011). Senge (2006) discussed the importance of leaders in understanding their own beliefs and the beliefs of their organization. He suggested beliefs and attitudes shape organizational practices. As leaders of change, leaders must understand the mindset of their organization so that they may focus on exactly what should change, rather than forming assumptions.

Guilbault (2009) examined administrators in Florida and their attitudes toward acceleration. She discovered administrators had concerns regarding acceleration, including the student's social and emotional development and possible academic gaps. The researcher did not find a relationship between the administrator's knowledge of gifted students and the acceleration practices in their school. Rambo & McCoach (2012) discovered in their quantitative study that administrator support and attitudes are critical in a teacher's willingness to recommend acceleration.

In a qualitative study by Lewis, Cruzeiro, and Hall (2007), principals were interviewed about their leadership of the gifted program in their schools. The principals reported some research-based practices were in place, including ability grouping,

curriculum compacting, off-site enrichment, and informal cluster grouping. The researcher uncovered a theme that the principals were concerned gifted programs fostered elitism or the perception of elitism.

Barriers to Acceleration

The research supporting acceleration is very strong. However, researchers have discovered there are several myths and negative perceptions regarding acceleration.

Colangelo et al. (2004) identified the reasons for these myths. They also identified the myths as the barriers that inhibit acceleration from being a widely used practice.

Additional research by Siegle et al. (2013) resulted in the development of an attitudinal beliefs survey based upon the twelve barriers to acceleration.

The first barrier identified by the researchers was that many educators lack knowledge of the research supporting acceleration (Colangelo et al., 2004). Cochran-Smith and Little (1999) referred to this as the concept of knowledge for practice. This concept refers to the importance of educators learning and understanding theoretical knowledge in order to be able to apply it. In a survey developed and deployed by Siegle et al. (2013), the researchers discovered 73% of the gifted educators surveyed believed they were able to identify students who were potential candidates for acceleration. In addition, 58% of the same group believed having knowledge about acceleration would increase the practice of acceleration. In their survey research, Rambo and McCoach (2012) discovered when teachers receive training about gifted students and acceleration, their likelihood to recommend acceleration increases.

The second barrier identified by researchers was that educators lack confidence about acceleration. In a review of research regarding teacher efficacy, Protheroe (2008)

described teacher confidence to be “critically important” (p.45). The researcher stated teachers who had confidence about a practice or teaching behavior were more likely to demonstrate that behavior. In the survey research by Siegle et al. (2013), the researchers found educators did not report confidence about acceleration as a reason that they were not implementing acceleration.

The third barrier cited by Colangelo et al. (2004) was that acceleration is not implemented because of a conflict with an individual’s personal beliefs. Multiple researchers have discovered an individuals’ attitudes and beliefs impact their day-to-day practice (Pajeres, 1992; Reeves, 2009; Senge, 2006). In the research conducted by Siegle et al. (2013), it was reported gifted educators surveyed in this study appeared to hold positive personal beliefs about acceleration.

The fourth barrier identified by the researchers was that age, rather than readiness, determines a child’s grade placement in the United States (Colangelo et al., 2004). According to the National Center for Education Statistics, 44 states require that students are five years old at some time during the year that they are placed in Kindergarten. Only six states allow school districts to set their own policies for kindergarten readiness. In the state of Missouri, a student must be five years old by August 1, prior to attending kindergarten (Center for Educational Statistics, 2014). In the survey conducted by Siegle et al. (2013), 91% of the educators surveyed disagreed age was the best way to place students.

The fifth barrier identified by the researchers was the belief that it is safer not to accelerate students and doing nothing is less harmful than accelerating (Colangelo et al., 2004). According to Benbow (1992), “Students who are not given the opportunity to

accelerate exhibit lower achievement and behavioral problems, felt less comfortable in school, and have poor attitudes” (p.6). Siegle et al. (2013) revealed 96% of the educators surveyed disagreed acceleration was potentially harmful to students and their future academic success. In their survey research, Rambo and McCoach (2012), concluded teachers believe that the potential negative outcomes outweigh the positive outcomes when considering acceleration.

The sixth barrier identified was that acceleration is not part of college of education teacher preparation coursework (Colangelo et al., 2004). In an attitudinal study of undergraduate students in teacher preparation programs, the researchers found a majority of those who responded believed academic acceleration would have a negative impact on the student socially (Bain, Bliss, Choate, & Brown, 2007). As a result, the researchers recommended specific information about acceleration, and the research to support it, be part of the teacher preparation coursework. In the survey conducted by Siegle et al. (2013), 87% of the respondents agreed acceleration should be included in preservice teacher coursework.

The seventh barrier identified was the perception by some that acceleration pushes children through childhood (Colangelo et al., 2004). Gross (2002) found many gifted children are not understood by their same age peers. In addition, the researcher reported often times a gifted child is more mature than their same age peers, often in line with their ability. Siegle et al. (2013) reported 65% of the educators surveyed believed there was more pressure placed on students who were accelerated. However, the researchers did not explore whether the educators considered this pressure positive or negative.

The eighth barrier identified was that educators are concerned about the social adjustment of accelerated children (Colangelo et al., 2004). In a study conducted by Southern et al. (1988), the researchers revealed teachers and administrators that participated in the study had concerns about the social and emotional development of gifted students. Colangelo et al. (2004) agreed the evidence about the positive effects of acceleration on social success was not as evident as the positive effects of academic success. However, the researchers urged evidence exists that supports that acceleration can broaden a student's friendship group. The research of Siegle et al. (2013) uncovered mixed results on this topic. The researchers discovered 25% of the educators believed accelerated students would have difficulty making new friends. Conversely, 37% believed accelerated students make friends easily.

The ninth barrier identified was the belief that individual students are less important than an equal opportunity for all (Colangelo et al., 2004). The researchers identified the source of this concern as the standards based reform movement. Researchers urged this movement created a barrier to the individual needs of gifted students being met (Moon et al., 2007). In the research study conducted by Siegle et al. (2013), 92% of the educators surveyed reported they did not believe that acceleration was unfair for those students who were not accelerated. In addition, the educators surveyed did not believe that acceleration negatively impacts a school's test scores.

The tenth barrier identified was the belief of some educators that accelerating an individual student could hurt the self-esteem of other students who are not accelerated (Colangelo et al., 2004). While little research has been conducted on this topic, the researchers urged children are accustomed to their peers advancing at different levels in

areas such as the arts and athletics and adding the area of academics should not have a negative impact on other students. In the survey research conducted by Siegle et al. (2013), the researchers found the educators surveyed believed acceleration impacted non-accelerated students. While the educators believed their peers would resent students who were accelerated, fewer believed the accelerated students would be bullied.

The eleventh barrier identified by the researchers was that there would be gaps in knowledge of accelerated students who skipped a grade level (Colangelo et al., 2004). Terman (1939) found gifted learners were able to learn material in less than half of the time that it took their typical peers. Participants in the survey conducted by Siegle et al. (2013) indicated the majority, 65%, did not believe that there would be gaps in the accelerated students knowledge.

The final barrier identified was that people most remember unsuccessful attempts at acceleration. The researchers shared their beliefs that most failed attempts at acceleration have been due to poor planning and implementation (Colangelo et al., 2004). In the research conducted by Siegle et al. (2013), survey respondents remembered students who had been successfully accelerated. In addition, 75% of the respondents reported they were familiar with a student who should have been accelerated.

The barriers identified by Colangelo et al. (2013), coupled with the attitudinal survey study by Siegle et al. (2013), explained the reasons why the research-based practice of acceleration is not universally implemented. Additional research has been conducted that has identified other themes that prohibit acceleration. These themes are discussed in the next section.

Other Themes that Prohibit Acceleration

In addition to addressing the barriers identified by Colangelo, et al. (2004), the research of Siegle et al. (2012) utilized portions of a survey developed by Southern et al. (1989). This previous survey was developed to consider objections to acceleration across four dimensions, specifically considering the students who were accelerated. These dimensions included the students' academic adjustment, social development, emotional adjustment and inhibition in the development of leadership (Southern et al., 1988, p. 31). Through focus groups, Siegle et al. (2013) identified areas of concern regarding why educators might be hesitant to implement acceleration. In addition to the barriers identified by Colangelo et al. (2004), the researchers identified student needs and logistical issues as other themes that prohibit acceleration.

Through focus groups conducted, Siegle et al. (2013) identified four major student needs. These include academic needs, social needs, emotional needs and extracurricular needs. In the survey that was conducted, the researchers discovered overall educators believe that being accelerated meets the academic needs of the accelerated student. Some of the respondents indicated concerns about the emotional needs of the accelerated student, with 36% unsure if accelerated students were emotionally well adjusted, as well as 33% unsure if accelerated students were happy. Regarding social concern, the majority of those surveyed believe that accelerated students could form new friendships. In regard to concerns about extracurricular activities, the researchers found the accelerated students had opportunities to participate in extracurricular activities (Siegle et al., 2013).

Logistical issues identified by the researchers were based upon the results of the focus groups. These logistical issues included parental beliefs and support,

administrative support of acceleration, system support of acceleration, and increased teacher workload due to acceleration. The educators who completed the survey did not cite logistical issues as the reason for not accelerating students (Siegle et al., 2013).

Acceleration Policies

Policies pertaining to the education of gifted learners vary widely across the United States. While the Jacob K. Javits Act is a federal program which funds research and projects for gifted youth, there is no law mandating gifted education services at the national level. Therefore, policy development has been left to the state and local levels (Institute for Research and Policy on Acceleration, 2009).

Policy recommendations.

In 2009, *Guidelines for Developing an Academic Acceleration Policy* was published by the Institute for Research and Policy on Acceleration. While acceleration is important, the guidelines stressed acceleration should not replace gifted education programs. The guidelines described important elements of an acceleration policy. The first element was to provide accessibility, equity, and openness, with an emphasis that access and referral for consideration be made for all students. The second element was that the policy provide systematic procedures for the implementation of acceleration. The third element was that guidelines guarantee fair and systematic procedures. The fourth element was that guidelines negate non-academic issues from becoming problematic. The final element was a feedback loop and appeals process to prevent unintended consequences (Institute for Research and Policy on Acceleration, 2009).

Acceleration and gifted policy research.

Ten states have policies regarding acceleration and an additional 12 states have left such policies up to local school districts (Peters, Matthews, McBee, & McCoach, 2014). In a research study of acceleration in the state of Florida, Guilbalt (2009) discovered acceleration policies in the districts studied only referred to grade skipping. The researcher also noted there was not consistency within and between school districts in Florida regarding processes. The researcher also noted the policies studied did not establish guidelines for systematic implementation.

Gifted education policies in Missouri.

Unlike other states, Missouri does not have a law that requires school districts to develop gifted education programs. The State of Missouri recognizes seven models for gifted education (Christian, 2008). Two of the models, Advanced Placement and International Baccalaureate, are identified as types of acceleration. The other five models are based on program design, rather than actual procedures, practices, and strategies. These program designs include Resource Room Teacher (RRT), Educational Resource Teacher (ERT), Special Class Teacher (SCT), Gifted Resource Teacher (GRT) and Programs for Exceptionally Gifted Students (PEGS).

Missouri State Statute 161.249, passed by the Missouri legislature, established the Gifted Advisory Council in 2013. This council was established to provide advice and recommendations to the Missouri State Board of Education regarding the education of the gifted and talented students in the state of Missouri (Advisory Council on the Education of Gifted and Talented Children, 2015). This advisory council published an annual report in May of 2015, along with 10 recommendations for action by the State Board of Education. Included in these 10 recommendations, is recommendation 6:

“DESE should require all Missouri districts to have a policy allowing acceleration for demonstrating advanced performance or potential for advanced performance and the social/emotional readiness for such acceleration. The policy should include subject acceleration and whole grade acceleration, among other opportunities” (Advisory Council on the Education of Gifted and Talented Children, 2015, p. 12).

In a program review of gifted education in Missouri, Christian (2008) evaluated the effectiveness of the different program delivery models for gifted education in the State of Missouri. In this study, the researcher found the type of program delivery model offered by school districts produced contradictory results. The lack of research related to gifted programs in Missouri, combined with the absence of laws requiring gifted education are reasons for conducting this study.

Summary

This chapter reviewed the body of literature surrounding gifted education. This review of the literature was divided into three sections. The first section included information on the early gifted education theorists and practitioners in the field (Jolly, 2005). The second section identified current issues facing gifted education, which include the standards based movement (Moon et al., 2007), the education of young gifted children (Walsh et al., 2012), the need for systematic process for the identification and provision of services for gifted children (DuFour et al., 2008), and finally the need for fidelity of implementation of research-based methods (Renzulli, 1992). In addition, the second section summarized the research-based methods of gifted instruction, which include enrichment, ability grouping, and acceleration (Hattie, 2009). The third section addressed the practice of acceleration, including educator beliefs (Siegle et al., 2013),

barriers to implementation (Colangelo et al., 2004), and policy considerations (Institute for Research and Policy on Acceleration, 2009).

Chapter I defined the purpose of this study. Chapter III describes the quantitative methodology of this study, including the process of survey validation, piloting and survey sampling (Rambo & McCoach, 2012). Chapter IV presents the findings of the quantitative study, including inferential and descriptive statistical analysis. Chapter V includes the summary and implications of the study, including the findings of this study and how they add to the body of research regarding acceleration. Finally, further research recommendations are explained.

Chapter III

Methodology

This study focused on the practice of the acceleration of gifted elementary students in Missouri and administrator attitudes and beliefs regarding acceleration. The research questions pointed to a quantitative study. A survey was developed based on a survey by Rambo and McCoach (2012). The survey focused on research-based gifted education practices at the elementary level, as well as the attitudes and beliefs of administrators of gifted education in the state of Missouri towards the practice of acceleration. The individuals surveyed were identified as the gifted education contact for their school district. After receiving Research and Review Board (RRB) approval, the survey was first piloted for content validation. After changes were made, it was then piloted with a small sample for reliability, and then fully deployed. The survey results were disaggregated based on districts with and without state approved elementary gifted programs, position, years of experience, type of district, (size and location), and level of education. This chapter discusses more in depth the participants, selection/sampling, survey development, content validation and survey reliability. In addition, a description of the data analysis, as well as the research study budget and statement regarding human participants is also addressed.

Participants

The subjects of this study were administrators of gifted education in the state of Missouri. Data was gathered from surveys provided to administrators of gifted programs, in the districts that had a Department of Elementary and Secondary Education (DESE) approved gifted education program in the state of Missouri for the 2015-16 school year.

Gifted education administrator is defined as those individuals who have been identified by their district as the gifted program contact. A listing of these districts and gifted program contacts was obtained from DESE. This list included 475 individuals. Because the researcher is one of the individuals who is on this list, she was excluded from the study. No factors were used to exclude any other possible participants from this study.

Selection/Sampling

A list of the administrators of gifted education, or gifted program contacts, was obtained from the Missouri Department of Elementary and Secondary Education. For the pilot study, the researcher selected 25 of the gifted education contacts from the list for the piloting of the survey. This researcher made contact with each of these individuals by email inviting them to complete the survey. The piloting of the survey occurred on November 14, 2015.

After revisions were made to the survey, an email was sent to the remaining 449 individuals requesting their participation in the study, with an option to not be included in the survey pool. There were six individuals who requested to not participate in the study. The survey was deployed to 443 individuals on December 1, 2015. Participants gave consent to be involved in the study by completing the online survey. The body of the email outlined participant confidentiality, the ability to withdrawal at any time without penalty, lack of foreseen harm to respondents, and a brief overview of the study's aim to provide insight into the perceptions of the acceleration of elementary gifted students. A window of two weeks was allowed for participants to complete the survey. A follow up email was sent 10 days after the initial email to those who had not completed the survey. A second reminder email was sent on the final day of the survey. The survey that is

discussed in this section was developed based on a previous study by Rambo and McCoach (2012). The next section describes the development of this survey tool.

Instrumentation

Administrator attitudes regarding the practice of acceleration, along with district and building practices of gifted education, were measured with this survey. The survey consisted of 38 questions. The items of this survey were based on a review of the research, input from other administrators, and professional experience of the researcher. The work of Siegle et al. (2013) and Rambo and McCoach (2012) contributed significantly to the survey items. The items of the survey were arranged in the following order: demographic information, acceleration practices, other gifted education practices, attitudes/beliefs regarding acceleration, and acceleration policies/procedures. All versions of the survey can be found in the Appendix of this document, with the original survey as Appendix A, and the final survey as Appendix D.

The demographic information section included questions regarding years of experience in education, highest degree completed, type of district (rural, suburban, urban), position, and whether the district had a state approved elementary gifted program.

The section on gifted education practices was a series of questions that asked about the following acceleration practices: grade skipping/whole grade acceleration, subject matter acceleration, and curriculum compacting. There were also two questions regarding two other gifted education practices: enrichment and ability grouping. These questions utilized a 7 point Likert scale for each statement to determine the frequency of use of the practice. The value of 1 was assigned the term “never”, and the value 7 was assigned the highest frequency of occurrence of the practice.

The section of the survey regarding attitudes and beliefs towards acceleration was taken partially from the work of Rambo and McCoach (2012). Questions D2a and D2e are directly from the survey. Questions A1b, A2b, B1, D2b, D2c, D2d, and F2 are modified from the survey. This researcher wrote the remaining questions. The survey questions are written to address eight of the twelve barriers identified by Congaleo et al. (2004). The eight barriers were chosen based upon the ability to tie them directly to the individual attitudes and beliefs about acceleration. The barriers identified are coded in the survey. These barriers include lack of knowledge about acceleration (A), lack of confidence implementing acceleration (B), personal beliefs (C), the belief that acceleration is less harmful than accelerating (D), a belief in equal opportunity for all students (E), concerns about gaps in knowledge for accelerated students (F), prior attempts at acceleration were not successful (G), and the perception that acceleration pushes children through childhood (H) (Colangelo et al., 2004).

The attitudes and beliefs questions utilize a 7-point Likert scale for each statement. The scale ranges from “strongly agree” (7) to “strongly disagree” (1). Items designated as A2, B2, C2, D2, E2, F2, G2, and H2 were reverse scored. These items were randomly arranged on the pilot and the full survey to help minimize the threat of a response set by the participants.

The final section of the survey consisted of questions surrounding policy and procedures. There are three yes/no questions, regarding the existence of district acceleration policy and procedures. The third question goes in depth for those that answered yes to the policy and procedures questions, asking the administrator an additional set of yes/no questions based upon the recommendation from the National

Work Group on Acceleration (2009). After the survey was developed, and RRB approval was granted, the survey was tested for validity and reliability.

Validity and Reliability

While this survey was based upon other surveys, testing for reliability and validity was necessary in order for survey to be a dependable research tool. Data collected from the pilot study and the full study was used to determine the internal consistency of the instrument. The pilot survey was first administered to content experts in the education field. After revisions, a second pilot was conducted for reliability. The results of these pilot surveys were employed to review and improve the survey tool.

Content Validation Pilot

Prior to entering the survey into QuestionPro, the expert validation pilot was conducted by utilizing Google Forms. This process was utilized to address content validity, the alignment of the survey questions, and the scale they were intended to assess. The researcher used the first version of the survey instrument as presented in Appendix B to gather feedback from experts in the field of gifted education and acceleration. Those experts were three retired administrators of gifted education and two practicing administrators with experience in gifted education. The survey was sent to each of these experts, and they were asked to comment or respond on the survey's nature, clarity and effectiveness. Specifically, the researcher sent out Rovinelli and Hamblen's Index of Item-Objective congruency (1977). A scale of -1, 0, and 1 was referenced to gain the needed information. The value -1 indicated the question was unclear, 0 was neutral, and 1 signified the question was clear. Feedback from the experts was used to further revise and improve the survey instrument. The survey was sent to these five

experts on November 1, 2015 and all had completed the survey as of November 5, 2015. Appendix F represents the Rovinelli and Hambleton's (1977) index aggregate results for each question of the survey. A value of 1.00 is the highest possible value. Ideally, values should be .60 or greater (Rovenelli & Hambleton, 1977). Only two questions did not have a value of .6 or greater. Rather than eliminating those two questions, they were modified to add clarification. These changes can be found in the pilot survey found in Appendix C.

Survey Pilot

After changes were made to the survey through the content validation process, the survey was entered into Questionpro. Twenty-five administrators of gifted education were randomly selected from the pool of 474 individuals on the DESE listing of gifted education contacts. An email was sent to the individuals inviting them to participate in the study. The pilot survey was sent on November 14, 2015. A reminder was sent on November 20, 2015 and the survey closed on November 23, 2015. After the survey was closed, the pilot survey results were uploaded to the Statistical Package for Social Sciences (SPSS) software to perform a factor analysis to determine construct validity. The factor analysis was used to identify if relationships existed between the questions or variables according to the responses of the individual (Gay, Mills, & Airasian, 2009). Construct validity is the degree to which the questions distinctly address the perceptual scale regarding acceleration (Gay et al., 2009). For more information, see Appendix G data. Using 0.300 (+ and -) as a baseline, those statements well below or near the .300 mark were examined for future use. After the researcher reflected and received advice

from her graduate professor and advisor, edits were made, and all statements remained in the final survey.

Using the 16 responses from the pilot on the perceptual scale, Cronbach's Alpha was determined through SPSS for internal consistency and reliability. Cronbach's Alpha estimated the internal consistency reliability, which means that it determined how each of the items on the scale related to all of the other items on the scale. The result of this calculation is an alpha level. Alpha levels greater than 0.9 are excellent, less than or equal to 0.9 and greater than 0.8 are good, less than or equal to 0.8 and greater than 0.7 are acceptable. Lower values fall in the questionable to unacceptable ranges (Gay et al., 2009). The alpha value for the scale was 0.793. In initial testing it was confirmed the survey instrument held acceptable reliability within the scale.

Final Survey

After the survey was piloted and validated for content and necessary revisions were made, the final version of the survey instrument was emailed to the remaining 443 administrators of gifted education. The survey was open for 15 days. The final survey is Appendix D of this document. In addition, the informed consent can be found in Appendix E. To obtain a higher return rate, the administrators of gifted education were reminded via email to take the survey. After the survey was closed, the pilot survey results were uploaded to the Statistical Package for Social Sciences (SPSS) software to perform a factor analysis to determine construct validity. Construct validity is the degree to which the questions distinctly address the perceptual scale regarding acceleration (Gay et al., 2009). Specific factor analysis information can be found in Appendix H. The closer the calculation is to 1 (+ or -), the higher the validity (Gay et al., 2009). Using 0.300 (+

and -) as a baseline, those statements well below or near the .300 mark were examined.

There were five items that fell under the .300 mark and additional paired items that were above the .300 mark. These items can be found in Table I. After reflection and guidance from advisors, it was determined to eliminate those six items from the survey data in determining reliability and validity, as well as further data analysis.

Table 1

Factor Analysis of Eliminated Survey Items

Survey Item	Factor Analysis
I am confident in my school's district's abilities to identify students who are in need of acceleration.	-.034
I am not confident in my school's/district's abilities to identify students who are in need of acceleration.	.175
It is important to consider the needs of all learners, including gifted students.	.146
It is more important to focus on the needs of all of the students in my school/district, rather than focus efforts on the acceleration of a few.	.312
Students who are accelerated will not have gaps in their knowledge and skills despite skipping grade level content.	.242
Students who are accelerated will have gaps in their knowledge and skills due to skipping grade level content.	.420

Using the 113 full responses from the final survey on the perceptual scale, Cronbach's Alpha was determined through SPSS for internal consistency and reliability. The alpha value for the scale was .813. This test confirmed the survey instrument held good reliability within the scale. After the scale was determined to have good reliability within the scale, the data was analyzed using both descriptive and inferential statistics.

Data Analysis

This quantitative study was conducted to answer the overarching question of "What are the beliefs of administrators in the state of Missouri regarding the acceleration of gifted students?" There are five supporting research questions. Supporting research questions include:

- a. What concerns regarding acceleration are similar across the state of Missouri?
- b. What impact do administrator concerns in regard to acceleration have on practice in their school?
- c. Is there a significant difference between the beliefs of Administrators of gifted education in the state of Missouri who have state approved elementary gifted education programs and those who do not?
- d. Is there a significant difference in the practice of acceleration in school districts that have state approved elementary gifted programs and those who do not?
- e. Are there significant differences between administrators in the state of Missouri in their attitudes and beliefs based upon the demographic factors of years of experience, type of district and level of education?

Both descriptive and inferential statistics were utilized to analyze the data. Descriptive statistics were used on all components of the survey to paint a broad picture and answer some of the research questions. Mean median, mode, standard deviation and confidence interval were calculated for questions specific to gifted education practices and attitudes and beliefs. Analysis of variance (ANOVA) was calculated to investigate the differentiation between groups based on demographic information in regard to the perceptual scale. T-tests were calculated to differentiate between districts with and without state approved gifted programs and the research-based gifted education programs in school districts, as well as to differentiate between districts with and without state approved gifted programs on the administrator perceptual scale. The deployment of the survey, collection of the survey items, and data analysis all had budget implications that are discussed in the next paragraph.

Budget

The budget needed for this study was minimal. A majority of the study methods were electronic. A small budget of \$300 was set for upgrading the QuestionPro software after the trial period, any long distance telephone calls, and requested copies of the executive summary.

Human Participants

In accordance with the guidelines of Southwest Baptist University regarding the protection of human participants, a request for review was submitted to the Research Review Board (RRB) for approval to survey up to 475 participants in the study. After RRB approval was received, participant recruitment and data collection began. Participants were informed of the intent of the survey to gather information regarding the

practice of acceleration in elementary schools in the state of Missouri and were given the opportunity to withdrawal from the study at any time without penalty. Participants consented to the study by completing the survey. No identifying information was included in the survey.

Summary

This chapter described the quantitative methodology of this study, including the process of survey validation, piloting and survey sampling (Rambo & McCoach, 2012). It detailed the data analysis and differential and inferential statistical analysis that will be used to answer the overarching question “What are the perceptions of administrators in the state of Missouri regarding the acceleration of gifted students?”

In Chapter I, the purpose of this study was defined. Chapter II reviewed the body of literature surrounding gifted education. Chapter IV presents the findings of the quantitative study, including inferential and descriptive statistical analysis. Chapter V includes the summary and implications of the study, including the findings of this study and how they add to the body of research regarding acceleration. Finally, further research recommendations are explained.

Chapter IV

Analysis of the Data

Introduction

The final survey results comprised 164 administrators of gifted education. These respondents included 31 superintendents, 25 assistant superintendents, 33 directors, 19 principals, 2 assistant principals, and 54 “other”, which included 23 teachers, 15 administrators, 8 counselors and 8 respondents who did not indicate their position. These responses were uploaded into the SPSS software program. Descriptive statistics were utilized to present quantitative data in a simple and manageable way. Inferential statistics were applied to infer what that data revealed about the thinking and practices of a given population. Data is presented in this chapter to report the research-based gifted practices as well as to give insight into the perceptions of Missouri administrators of gifted education programs towards the practice of acceleration. The following research questions were addressed through the survey:

- a. What concerns regarding acceleration are similar across the state of Missouri?
- b. What impact do administrator concerns in regard to acceleration have on practice in their school?
- c. Is there a significant difference between the beliefs of Administrators of gifted education in the state of Missouri who have state approved elementary gifted education programs and those who do not?
- d. Is there a significant difference in the practice of acceleration in school districts that have state approved elementary gifted programs and those who do not?

- e. Are there significant differences between administrators in the state of Missouri in their attitudes and beliefs based upon the demographic factors of years of experience, type of district and level of education?

Gifted Practices Descriptive Statistics

The means, ranges, and standard deviations for the survey responses to the research-based gifted practices section are shown in Table 2. The mean is the average of responses according to each question of the gifted practices scale (Gay et al., 2009). The standard deviation is the square root of the variance of a set of scores and is considered the most stable measure of variability (Gay et al., 2009). Larger standard deviations indicate a wide variety of responses, while smaller standard deviations indicate responses closer to the average. The range is the set of lowest and highest possible score recorded for each gifted education practice (Gay et al., 2009). In this study the lower number indicates a lower occurrence of that gifted education practices, while a higher number indicates a more frequent use of the practice.

Table 2

Means, Standard Deviations, and Range of Research-based Gifted Education Practices

Practice	Mean	Standard Deviation	Range
Whole Grade Acceleration	1.95	1.16	1-3
Subject Acceleration	2.85	1.66	1-7
Curriculum Compacting	3.13	1.74	1-7
Enrichment	5.09	1.64	1-7
Ability Grouping	4.00	2.17	1-7

This scale was designed to measure the research-based gifted practices across the state of Missouri. The means indicate that that with a mean of 1.95, whole grade acceleration is the least occurring practice. The standard deviation of 1.16, indicates that whole grade acceleration is occurring across the state of Missouri with less than 3% of the gifted population, and in many districts it does not occur. Subject acceleration had a mean of 2.85 and standard deviation of 1.66, which indicated on average it is occurring with less than 10% of the gifted population, and in many districts it does not occur. Curriculum compacting had a mean of 3.13 and a standard deviation of 1.74, which indicated it was occurring on average with less than 5% of the total population. The results indicate that curriculum compacting is the most often used type of acceleration. Enrichment had a mean of 5.09 and a standard deviation of 1.64. This indicates that is a widely used practice in the state of Missouri, with the average response reporting that it is used occasionally with less than 5% of the total population. Lastly, ability grouping had a mean of 4.00 and a standard deviation of 2.17. The average response indicates that ability grouping is occurring on average with 25% or less of the gifted population, but the greater standard deviation indicated a greater variance in answers. After the acceleration practices section was analyzed, the researcher analyzed the acceleration scale using descriptive statistics.

Acceleration Scale Descriptive Statistics

The means, ranges, and standard deviations for the responses to the acceleration scale are shown below in Table 3. The higher number indicates a more favorable attitude toward the practice of acceleration. The lower number indicates a less favorable attitude

toward the scale. The figures for descriptive statistics are based upon the 18 questions of the acceleration perceptual scale.

Table 3

Mean, Standard Deviation and Range of Perceptual Scale

Items	Mean	Standard Deviation	Range
18	61.58	12.257	39-98

The scale was designed to determine the administrator's attitudes and perceptions toward the practice of acceleration for gifted students. The mean for the scale was 61.58, and the standard deviation was 12.257. The range of individual responses was 39-98. With a mean of 61.58, respondents as a group fell on the unfavorable side in their attitudes and perceptions toward the practice of acceleration for gifted students. The standard deviation of 12.257 indicates the responses given were widely distributed, meaning strong feelings landed on both sides of favorable and unfavorable. After analyzing the descriptive statistics for the acceleration scale, inferential statistics were applied to the gifted practices section.

Gifted Practices Inferential Statistics

Inferential Statistics were calculated to compare the average frequency of occurrences of each of the research-based gifted practices and compared it between districts that did and did not have a state approved elementary gifted education program. Data was then analyzed to determine any statistical differences in each research-based practice and those districts with and without a gifted program.

The test chosen to analyze the data was the t-test. The t-test is a parametric test of significance used to determine if a significant difference exists between the means of two independent samples (Gay et al., 2009). To calculate this, the means of the occurrence of each of the research-based practices was analyzed by comparing the districts with and without state approved elementary gifted education programs.

Data analysis using t-tests that show statistical differences were calculated. A statistical difference confirmed the likelihood a result or relationship is caused by something other than random chance. When testing for a significant difference, the researcher looked for “p-values” representing the probability that random chance could explain the result. When the p-value was 5% or lower, it was considered statistically significant. When the p-value was 1% or lower, it was considered very statistically significant (Gay et al., 2009). Areas without reportable differences have been left out as they are not significant. Table 4 below is a summary of significant differences regarding each of the research-based gifted practices and the whether or not they have a state approved gifted education program.

Table 4

Significant Differences Summary Gifted Practices and State Approved Gifted Programs

Research-based Gifted Practice	State Approved Program*	F	t-test	p value
Grade Skipping	Yes/No	15.242	3.593	.000
Curriculum Compacting	Yes/No	5.150	2.610	.025
Ability Grouping		12.463	5.938	.001

*First denotation represents higher frequency of practice

For each of the research-based gifted practices, comparing the responses for districts with a state approved program with those districts that did not have an approved program yielded statistically significant results. Districts with an approved gifted education program practice whole grade acceleration, or grade skipping at a significantly different higher level ($p=.000$) than districts without a state approved program. In addition, districts with a state approved gifted education program practice curriculum compacting on a more frequent basis than those districts that do not have a state approved program ($p=.025$). Finally, districts with a state approved gifted education program practice ability grouping on a more frequent basis than districts that do not have a state approved program ($p=.001$). Overall, this test showed school districts that have state approved elementary gifted education programs practiced the research-based gifted practices of grade skipping, curriculum compacting and ability grouping on a more frequent basis than those districts that do not have state approved elementary gifted education programs. After applying and analyzing the inferential statistics to the gifted practices section, inferential statistics were applied to the acceleration scale.

Acceleration Scale Inferential Statistics

Out of the 24 original questions theorized to be in the acceleration perceptual scale, 18 questions were determined valid through the survey process and calculated with high enough values to proceed with the inferential statistical analysis.. Cronbach's Alpha was used to demonstrate the degree of reliability. The value of .813 from the Cronbach's Alpha indicated a good measure of internal consistency. This coefficient of reliability ensured the confidence to move forward with inferential analysis with the 18 items of the scale.

Inferential statistics were calculated using the 18 questions. The mean value for the scale was calculated, then data was analyzed to determine any statistical differences found between the demographic differences as marked by the survey participants. Each of the following demographic questions were analyzed: age, level of education, position, size of district, location of district, and whether or not the district has a state approved elementary gifted program.

Data analysis using ANOVAs and a t-test that show statistical differences were calculated. A statistical difference confirmed the likelihood a result or relationship is caused by something other than random chance. When testing for a significant difference, the researcher looked for “p-values” representing the probability that random chance could explain the result. When the p-value was 5% or lower, it was considered statistically significant. When the p-value was 1% or lower, it was considered very statistically significant. Areas without reportable differences have been left out as they are not significant (Gay et al., 2009). Table 5 below is a summary of significant differences regarding each of the demographics on the acceleration scale.

Table 5

Significant Differences Summary Acceleration Scale

Test	Demographic	Variables*	Significance
ANOVA	Level of Education	Specialist	p=.051
ANOVA	District Size	Masters 201-500 501-1500	p=.012
ANOVA	District Location	Rural Suburban	p=.011
ANOVA	Position	Superintendent Director	p=.004

* First denotation in each box represents the more favorable to the scale.

The first area that reported a significant difference was in the respondents' level of education and their responses on the acceleration scale. Levels of education reported were bachelors, masters, specialist, and doctorate. Table 6 reports findings from the survey.

Table 6

ANOVA for Level of Education and Acceleration Scale

	Sum of Squares	Df	Mean Square	F	p value
Between Groups	1147.385	3	382.462	2.659	.052
Within Groups	15680.066	109	143.854		
Total	16827.451	112			

For the Acceleration Scale, statistically significant differences were found between the levels of education of the respondents. When Tukey's Honestly Significant Difference (HSD) test was performed, the difference in attitudes and perceptions about acceleration appeared between those having earned a Specialist Degree and those having earned a Masters Degree. Respondents with a Specialist Degree, with a mean of 64.7442 fell into the favorable range, while those with a Masters Degree fell in the unfavorable range. The difference was significant between these two groups ($p=.052$). This test showed administrators of gifted education who have a specialist degree have more favorable attitudes and perceptions of the practice of acceleration than those administrators of gifted programs who have a master's degree.

The second area that reported a significant difference was in the size of the district. Size of the districts reported were less than 200, 201-500, 501-1500, 1501-4000, 4001-10,000, and greater than 10,0001. Table 7 reports findings from the survey.

Table 7

ANOVA for District Size and Acceleration Scale

	Sum of Squares	Df	Mean Square	F	p value
Between Groups	1736.350	5	347.270	2.548	.032
Within Groups	14312.749	105	136.312		
Total	16049.099	110			

For the Acceleration Scale, statistically significant differences were found between the sizes of the districts. When Tukey’s HSD test was performed, the difference in attitudes and perceptions about acceleration appeared between those respondents in districts with 201-500 students and those with 501-1500 students. With a mean of 69.8235, respondents in districts with 201-500 students had a favorable attitude towards acceleration, while those in districts with 501-1500 had less favorable attitudes. This test showed administrators of gifted education who are in districts with 201-500 students have more favorable attitudes and perceptions of the practice of acceleration than those administrators of gifted programs who are in districts with 501-1500 students. The results are considered significantly different ($p=.032$).

The third area that reported a significant difference was in the location of the district. District locations reported were rural, town, suburban and urban. Table 8 reports findings from the survey.

Table 8

ANOVA for District Location and Acceleration Scale

	Sum of Squares	Df	Mean Square	F	p value
Between Groups	1680.545	3	560.182	4.043	.009
Within Groups	14965.312	108	138.568		
Total	16645.857	111			

For the Acceleration Scale, statistically significant differences were found between the district locations. When Tukey's HSD test was performed, the difference in attitudes and perceptions about acceleration appeared between those respondents in rural and suburban districts. With a mean of 64.0548, administrators in rural districts had favorable attitudes regarding the acceleration of gifted students, while those in suburban districts had an unfavorable attitude towards the practice. The difference between these two groups was considered statistically significant ($p=.009$). This test showed administrators of gifted programs in the state of Missouri do not have favorable attitudes and perceptions of acceleration, however administrators of gifted education who are in rural districts have more favorable attitudes and perceptions of the practice of acceleration than those administrators of gifted programs who are in suburban districts.

The fourth area that reported a significant difference was in the position of the respondent. Positions reported include superintendent, assistant superintendent, director, principal, and other. Table 9 reports findings from the survey.

Table 9

ANOVA for Position and Acceleration Scale

	Sum of Squares	Df	Mean Square	F	p value
Between Groups	2241.623	4	560.406	4.149	.004
Within Groups	14585.828	108	135.054		
Total	16827.451	112			

For the Acceleration Scale, statistically significant differences were found between the position of respondents. When Tukey’s HSD test was performed, the difference in attitudes and perceptions about acceleration appeared between those respondents who were superintendents and those who were directors. Respondents who were superintendents had favorable attitudes toward acceleration, while those who were directors had less favorable attitudes. The difference is considered statistically significant ($p=.004$). This test showed while as a whole, administrators of gifted programs in the state of Missouri do not have favorable attitudes and perceptions of acceleration, administrators of gifted education who are superintendents had favorable attitudes and perceptions of the practice of acceleration, while those administrators of gifted programs who are directors had significantly less favorable attitudes ($p=.004$). After the application of the inferential statistics to the acceleration scale, the final survey section regarding district acceleration policies was analyzed.

Acceleration Policy Results

Questions regarding district acceleration policies and procedures were asked to gain knowledge of existing acceleration policies and policies in school districts in the

state of Missouri. Additional questions were asked to clarify if the district’s policy was in line with the recommendations from the National Work Group on Acceleration (2009). Because of the nature of the data, it will be reported in raw form, rather than statistical measures. These results can be found in Table 10.

One hundred and thirty seven administrators responded to the first two questions of the survey. If the administrator’s response indicated they did not have an acceleration policy or procedure in their school district, they were not asked the follow up questions.

Table 10

Acceleration Policy Results

Question/Topic	Response	Number	Percentage
Familiarity with 2009 recommendations	Yes	41	29.93%
	No	96	70.7%
District acceleration policy/procedure	Yes	63	45.99%
	No	74	54.01%
Policy/procedure allows for any student to be considered for acceleration	Yes	45	75.00%
	No	15	25.00%
Systematic procedures	Yes	41	69.49%
	No	18	30.51%
Factors taken into consideration regarding acceleration decision making	Achievement	53	88.33%
	Ability	50	83.33%
	Aptitude	40	66.66%
	Social/Emotional	49	81.66%

	Physical Size	11	18.33%
	Interpersonal Skill	29	48.33%
Feedback Loop/Appeals Process	Yes	30	51.72%
	No	28	48.28%

At the end of the survey, respondents were given an opportunity to give any comments about their acceleration policy or procedure. Of the 63 respondents who reported they did have an acceleration policy or procedure, 10 responded to this opportunity to comment on their acceleration policy or procedure. One respondent mentioned their district relied heavily on the results of the Iowa Acceleration Scale. Another respondent stated because their district did not have a gifted program, acceleration is heavily relied on to address the needs of the gifted. One respondent discussed while their district does have a procedure, it is not published, which has caused some confusion. Two respondents reported their district policy was vague. Another respondent commented their elementary acceleration policy requires a student be a gifted student to be considered for whole grade acceleration. One respondent mentioned concerns about the lack of norm-referenced data on Missouri's state testing, as well as the lack of availability of economical assessments as potential barriers to making acceleration decisions. Another respondent identified the barrier of teacher attitudes and beliefs as a barrier to acceleration decision making. Another respondent mentioned while the district has a policy, it has not been requested by anyone. Another respondent discussed a previous acceleration their district made and the outcome for the student was not as successful as hoped it would be, therefore enrichment is used more often.

Although the responses varied, this qualitative data provided some additional insight regarding acceleration policies and procedures.

Summary

This chapter presented the findings of the quantitative study, including inferential and descriptive statistical analysis. Significant differences were found between demographic groups in regard to their responses on the perceptual scale regarding acceleration, as well as differences in districts with and without gifted programs and the types of research-based gifted education methods utilized in districts.

In Chapter I, the purpose of this study was defined. Chapter II reviewed the body of literature surrounding gifted education. Chapter III described the quantitative methodology of this study, including the process of survey validation, piloting and survey sampling (Rambo & McCoach, 2012). Chapter V includes the summary and implications of the study, including the findings of this study and how they add to the body of research regarding acceleration. Finally, further research recommendations are explained

Chapter V

Conclusions and Recommendations

Introduction

The purpose of this study was to investigate the acceleration policies, procedures, practices, beliefs, and attitudes regarding acceleration in school districts in Missouri.

There was a need to gather information from administrators across the state of Missouri regarding beliefs and attitudes centered on acceleration practices.

Acceleration is defined as gifted programming that results in advanced academics at a younger age (Colangelo et al., 2004). This concept is the basis for the research of this study. Through the work of the University of Iowa surrounding this subject, researchers discovered acceleration is one of the most underutilized methods of gifted instruction. However, research also revealed it is one of the most effective methods of gifted instruction (Hattie, 2009).

Administrator attitudes influence their leadership approach, and the impact on student achievement is extensively documented (Reeves, 2009). Research has found teacher attitudes toward acceleration were positive (Siegle, Wilson, & Little, 2013). Because administrators have positional power to change acceleration policy and practices in their school, this study was designed to determine their beliefs regarding acceleration.

Summary of Methods

The research questions pointed to a quantitative study. A survey was developed based on a survey by Rambo and McCoach (2012). The survey focused on research-based gifted education practices at the elementary level, as well as the attitudes and beliefs of administrators of gifted education in the state of Missouri towards the practice

of acceleration. The individuals surveyed were identified as being the gifted education contact for their school district. After receiving Research and Review Board (RRB) approval, the survey was piloted and then fully deployed. The survey results were disaggregated based on districts with and without state approved elementary gifted programs, type of district (size and location), educator position, years of experience, and level of education. In addition, both descriptive and inferential statistics were calculated from the data, and then analyzed and used to answer the following research questions:

- a. What concerns regarding acceleration are similar across the state of Missouri?
- b. What impact do administrator concerns in regard to acceleration have on practice in their school?
- c. Is there a significant difference between the beliefs of Administrators of gifted education in the state of Missouri who have state approved elementary gifted education programs and those who do not?
- d. Is there a significant difference in the practice of acceleration in school districts that have state approved elementary gifted programs and those who do not?
- e. Are there significant differences between administrators in the state of Missouri in their attitudes and beliefs based upon the demographic factors of years of experience, type of district and level of education?

Research Question One: Common Concerns About Acceleration

The first research question was as follows: what concerns regarding acceleration are similar across the state of Missouri? These concerns were revealed using the acceleration scale. Results indicated overall, administrators of gifted programs in the

state of Missouri were not favorable of acceleration. The mean of the acceleration scale was 61.58, with a standard deviation of 12.26. The reported numbers revealed administrators of gifted programs in the state of Missouri were overall unfavorable about the practice of acceleration, yet the high standard deviation suggests there are administrators that are less concerned about the practice than others.

When examining specific statements, the researcher discovered the questions that had the highest frequency of neutral to negative responses were the questions related to social/emotional concerns. The first set of questions that rose to the level of concern was whether students could have their social needs met with older students. Neutral to negative feelings were expressed by 50.27% of the respondents, while 59.26% of the respondents had neutral to negative responses regarding students having their social needs met with their same age peers. Additionally, 67.92% of the respondents either agreed or were neutral when responding about the likelihood of students who are accelerated experiencing anxiety. Finally, in response to questions about accelerated students being well adjusted, 50.36% of the respondents were neutral in their response about emotional adjustment, and 59.26% were neutral in their response regarding social adjustment. Thus, the results indicate administrators have concerns or uncertainty that accelerated students would be negatively affected socially, are likely to experience anxiety, and may have difficulties with adjustment issues.

These results are consistent with a similar study by Guilbault in 2009. In that study, the researcher examined administrator attitudes in the state of Florida toward the practice of acceleration and discovered concerns about the student's social and emotional development. In addition, Siegle et al. (2013) conducted focus groups and found

respondents expressed concerns about the emotional needs of the accelerated student, including being unsure if the accelerated students were emotionally well-adjusted and happy. Thus the findings related to the first research question are consistent with the literature.

Research Question Two: Impact of Beliefs on Practice

The second research question was as follows: what impact do administrator concerns in regard to acceleration have on practice in their school? Overall, administrators of gifted programs in the state of Missouri were not favorable in their attitudes toward the practice of acceleration. It appears the concerns related to social and emotional needs of accelerated students, coupled with the overall unfavorable attitudes, are impacting the practice of acceleration in elementary schools in the state of Missouri.

Compared to the other research-based gifted education practices of ability grouping and enrichment, acceleration occurred on a less frequent basis. The results of the survey revealed curriculum compacting was the most frequently used acceleration practice. Results revealed curriculum compacting was being used on average with less than 5% of the total population. Subject acceleration was reported on average as being used with less than 10% of the gifted population; however, half of the respondents reported it was not happening at all in their district. Whole grade acceleration was the least occurring practice in the state of Missouri. Results indicate whole grade acceleration is occurring with less than 3% of the total gifted population in the state of Missouri; however half of the participants responded it was not occurring in their school district.

The acceleration scale indicated the attitudes of administrators in the state of Missouri towards acceleration are unfavorable. Despite the research behind the effectiveness of the practice (Hattie, 2009), the practice of acceleration is not a frequently used practice in the state of Missouri, with half of the respondents stating whole grade and subject acceleration were not occurring in their district. These findings appear to be linked to the third barrier identified by Colangelo et al. (2004), that acceleration is not implemented because of a conflict with an individual's personal beliefs. The results of this study are consistent with previous research studies that have found an individual's attitudes and beliefs impact their day-to-day practice (Pajeras, 1992; Reeves, 2009; Senge, 2006).

Research Question Three: Administrator Beliefs and Gifted Programs

The third research question was as follows: is there a significant difference between the beliefs of administrators of gifted education in the state of Missouri who have state approved elementary gifted education programs and those who do not? As stated in the previous chapter, 65.43% of the respondents were administrators of gifted education in schools districts with a state approved elementary gifted program.

Results of the t-test revealed there was not a significant difference in the beliefs of administrators of gifted education in the state of Missouri who have a state approved elementary gifted education program and those who do not. Both groups were unfavorable in their attitudes toward the practice of acceleration, with the mean of the respondents with an approved elementary gifted education program being slightly lower than the respondents in districts without an elementary gifted education program. It should be noted both populations had large standard deviations, indicating a wide variety

of responses in each of the groups. These findings are unique to the state of Missouri, because of its structure and definition of state approved programs. Therefore, there is no comparison in the research.

Research Question Four: Acceleration Practice and Gifted Programs

The fourth research question is as follows: is there a significant difference in the practice of acceleration in school districts that have state approved elementary gifted programs and those who do not? Significant differences in research-based gifted education practices were found in whole grade acceleration ($p=.000$), and curriculum compacting ($p=.025$), but not in subject specific acceleration. Respondents in districts with state approved elementary gifted programs reported on average all three practices occurred on a more frequent basis than in the districts without a state approved gifted education program.

These findings are unique to the state of Missouri, because of its structure and definition of state approved programs. However, it can be assumed districts with state approved gifted education programs have more knowledge and training about gifted education, due to the fact that being a state approved program requires the district to have a teacher of gifted education on staff in the district. Therefore, the first barrier identified by Colangelo et al. (2004) that many educators lack knowledge of the research supporting acceleration appears to be applicable to the findings of this study. Cochran-Smith and Little (1999) referred to this as the concept of knowledge for practice. Because districts that are not state approved gifted programs are not required to have certified teachers of the gifted, it can be assumed a base of knowledge of gifted education and acceleration is lacking in that school district.

Research Question Five: Administrator Beliefs and Demographic Factors

The final research question is as follows: are there significant differences between administrators in the state of Missouri in their attitudes and beliefs based upon the demographic factors of years of experience, type of district, and level of education? As reported in the previous chapter, an analysis of variance of the acceleration mean results was calculated for the various demographic factors. There was not a significant difference related to the demographic factor of years of experience, however significant differences were found in the demographic factors of type of district and level of education. The type of district was broken into two different factors: size and location. Respondents in districts whose student population was 501-1500 had a significantly less favorable rating than respondents in districts with 201-500 students.

When comparing location of district, respondents in districts located in rural areas had a significantly more favorable attitude toward acceleration than those respondents in suburban districts. However, all attitudes toward acceleration fell in the neutral to unfavorable range based upon the demographic factor of location type. There was a wide range of response in administrators who worked in rural areas, with 54-point range in the responses of administrators in rural districts (36-92). This wide range in responses shows a wide variation of attitudes towards acceleration across administrators in rural areas. In the open ended response question regarding acceleration policies, one administrator in a rural district said, "I rely heavily on acceleration for a portion of the gifted students who I identify." Therefore, it appears some administrators in rural areas have positive feelings and experiences with the practice of acceleration.

When analyzing differences based on level of education, a significant difference was found in those respondents who had a masters degree versus a specialist degree. Respondents with a specialist degree were significantly more favorable towards acceleration than those respondents reported having a master's degree. Those with a masters degree were unfavorable in their attitudes, while those with a specialist were more neutral to favorable in their responses. These findings are unique to this study, therefore there is no comparison in the research.

Other Findings

There were other survey findings not directly related to the research questions. Those findings were related to: the existence of an acceleration policy or procedure at the school or district level, the position of the respondent as an significant demographic factor, the frequency of occurrence of enrichment and ability grouping across the state, and a pattern of the frequency of neutral responses.

The first additional factor that emerged was the existence of an acceleration policy or procedure at the school district level. Of all of the administrators surveyed, 54.01% of the individuals responded their school district did not have an acceleration policy or procedure, and 70.07% of the respondents were not aware of the 2009 recommendations from the National Work Group on Acceleration that schools have a written policy addressing acceleration issues. In addition, of the respondents that reported they had a state approved elementary gifted program, only 54.95% also reported they had an acceleration policy or procedure. For those respondents in districts that did not have a state approved elementary gifted program, 28.26% reported having an acceleration policy.

A second factor was related to the variations discovered based on the position of the respondent. Those respondents who self reported as being superintendents were significantly more favorable in their attitudes toward acceleration than those who reported being in the position of director. Twenty- two individuals reported being superintendents, and the mean of the acceleration scale fell into the favorable range with this group. However, it should be noted there was a 49-point difference in the range of responses in this group (43-92). In addition, those who were principals also fell in the favorable range, while those who reported themselves as directors, assistant superintendents and “other” all fell into the unfavorable side of the acceleration scale. This finding is important and is connected to Senge’s (2006) suggestion that beliefs and attitudes shape organizational practices. Rose (2011) urged educational leaders to be attentive to their own attitudes and beliefs so they can change the outlook and perspective of the organization they lead. Rambo and McCoach (2012) discovered in their quantitative study administrator support and attitudes are critical in a teacher’s willingness to recommend acceleration.

The third additional factor was the frequency of enrichment and ability grouping as research-based gifted education practices across the state. Enrichment was defined as activities designed to enrich or enhance the learning of gifted students (Hattie, 2009). On average, enrichment was occurring with at least 5% of the total population on a regular basis. Ability grouping was defined as grouping gifted students together often through a different curriculum than other typical learners (Hattie, 2009). On average, ability grouping was occurring occasionally with less than 25% of the gifted population. These results were consistent with findings by Lewis, Cruzeiro, and Hall (2007), in which

principal's identified ability grouping, curriculum compacting, enrichment and informal cluster grouping were in place in their schools.

Finally, in analyzing the mode, or most frequent response, of each of the questions on the acceleration scale, there emerged a pattern of "neutral responses" toward certain beliefs and attitudes regarding acceleration. Responses that were neutral centered on acceleration as a research-based practice, the impact of acceleration on a student's social and emotional well-being, experience with acceleration attempts, and acceleration causing academic burn out. These results could suggest respondents were uncertain about particular statements. It also could suggest the respondents did not agree or disagree with the statements. This finding is significant because it could speak to the lack of information and research in the state of Missouri about the topic of acceleration.

Conclusions

Administrator attitudes toward acceleration are not positive in the State of Missouri. In addition, acceleration is the least occurring research-based gifted education practice in the state. The practice of whole grade acceleration is the least occurring practice, with subject acceleration also low as compared to enrichment and ability grouping. However, the occurrence of acceleration is similar to the number of districts with acceleration policy and procedures.

Administrator attitudes toward acceleration show a great variance in responses. In addition, the frequency of neutral responses shows a hesitation or lack of knowledge toward some ideas about acceleration. A significant finding in this research was the favorable attitudes of superintendents toward the practice of acceleration. Because

superintendents work closely with their boards of education in setting policy and procedure, this finding is important moving forward.

Recommendations for future research

There are several recommendations for further research. First, regarding the concerns of administrators in the state of Missouri about the social/emotional development of accelerated students points to a need for further research in this area. There has been little research about the impact of acceleration on the social/emotional needs of gifted students. Future research on this topic may help determine if the concerns expressed by administrators in Missouri in this study and in other previous studies are justified. Secondly, in order to determine if the superintendent's attitudes and beliefs are applicable to the entire state, it is recommended this survey be duplicated to include all superintendents statewide.

This study could also be replicated in other states to determine the beliefs of administrators in those states towards the practice of acceleration. In addition, a qualitative study of individual school districts in the state of Missouri that rely on the practice of acceleration would add to the body of research.

Finally, it is recommended further research be completed delineates between whole grade acceleration and subject acceleration. Gathering attitudes and beliefs about each of these acceleration practices may give more insight into the results of the acceleration scale.

Recommendations for practice

The Gifted Advisory Council recommendation to require districts to develop an acceleration policy may spur administrators in the state of Missouri to be aware of the

research behind the practice of acceleration. The advisory council should also provide models and research about the practice of acceleration, as well as the potential financial benefits of the practice.

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Appendix A

Original Survey

Demographic Information

Years of Experience in Education

<5 years

5-9 years

10-15 years

15-20 years

20+ years

Highest Degree

Bachelors

Masters

Specialist

Doctorate

Enrollment Size of School District

<200

201-500

500-1500

1501-4000

4001-10,000

>10,001

Type/Location of School District

Rural

Town

Suburban

Urban

Position

Superintendent

Assistant Superintendent

Director

Principal

Assistant Principal

Other Specify: _____

My district has a state approved elementary gifted education program

Yes

No

Gifted Education Practices

1. Grade Skipping, also known as whole grade acceleration, occurs when a student is placed in a grade placement above his same age peers. This acceleration practice can occur at the beginning or during the school year. How often does the practice of grade skipping occur in your school or district?

1=Never

4=Occasionally, less than 3% of the gifted population being grade skipped each year.

7=On a regular basis with more than 5% of the gifted population being grade skipped each year.

1 2 3 4 5 6 7

2. Subject matter acceleration allows students to be placed with classes with older peers (or materials from those classes) for some of the school day. The students may physically attend this class, or may use the materials/assignment from the higher grade placement for some of the school day. How often does the practice of subject matter acceleration occur in your school or district?

1= Never

4= Occasionally, with less than 10% of the gifted population being subject matter accelerated each year

7= On a regular basis with more than 10% of the gifted population being subject matter accelerated each year

1 2 3 4 5 6 7

3. Curriculum compacting is the practice of reducing the amount of introductory

activities, drill, practice and review with the time gained used for more advanced content instruction or enrichment activities. How often does the practice of curriculum compacting occur in your school or district?

1= Never

4= Occasionally, with less than 5% of the student population

7= On a regular basis with more than 5% of the total student population

1 2 3 4 5 6 7

4. Enrichment is the practice of using activities to broaden the lives of gifted students.

How often does your district/school employ this strategy?

1= Never

4= Occasionally , with less than 5% of the total student population

7=On a regular basis with more than 5% of the total student population

1 2 3 4 5 6 7

5. Ability grouping is the practice of placing gifted students in special homogeneous classes with a challenging curricula. How often does your district/school employ this strategy?

1= Never

4=Occasionally, with 25% or less of the gifted population

7=On a regular basis with more than 25% of the gifted population

1 2 3 4 5 6 7

Attitudes and Beliefs Regarding Acceleration

Please rate the following statements regarding acceleration based on the following scale:

- 7 Strongly Agree
- 6 Agree
- 5 Somewhat Agree
- 4 Neutral
- 3 Somewhat Disagree
- 2 Disagree
- 1 Strongly Disagree

- A1a Acceleration is a research-based practice that is highly effective for gifted students.
- A1b Students who are accelerated will have grades equal to or greater than students of the same ability level that were not accelerated.
- A2a Students who are accelerated will have lower grades than students of the same ability level that were not accelerated.
- A2b Students who are accelerated will experience academic burn out.
- B1 I am confident in my school's/districts ability to identify students who are in need of acceleration.
- B2 I am not confident in my school's/district's ability to identify students who are in need of acceleration.
- C1 I believe that gifted students should be given the opportunity of academic acceleration.

- C2 I do not agree with the practice of academic acceleration for gifted students.
- D1a Gifted students can have their social needs met when educated with older students.
- D1b Gifted students who are accelerated are well adjusted emotionally.
- D1c Gifted students who are accelerated are well adjusted socially.
- D2a Gifted students have their social needs met best when educated with their same age peers.
- D2b Acceleration is harmful to a student's emotional well being.
- D2c Acceleration is harmful to a student's social well being.
- D2d Gifted students who are accelerated are more likely to experience anxiety.
- D2e Being educated with older students is harmful to social-emotional development of the student.
- E1 It is important to consider the needs of all learners, including gifted students.
- E2 It is more important to focus on the needs of all of the students in my school/district, rather than focus efforts on the acceleration of a few students.
- F1 Students who are accelerated can easily master content and skills that they are accelerated through.
- F2 Students who are accelerated will have gaps in their knowledge and skills.
- G2 I would not recommend acceleration because I have witnessed a previous failed acceleration attempt.
- G1 I would recommend acceleration because I have witnessed a previous successful acceleration.
- H2 Acceleration forces children to grow up too fast.

H1 Academic acceleration is an appropriate strategy for some gifted students.

Acceleration Policies and Procedures

1. Are you familiar with the 2009 recommendations from the National Work Group on Acceleration that recommended each school district have a written acceleration policy?

Yes

No

2. Does your school district have an acceleration policy or procedure?

Yes

No

3. If yes, please answer the follow questions:

The policy or procedures allow for any student to be considered for acceleration.

Yes No

The policy or procedures provide systematic procedures for the implementation of acceleration.

Yes No

The policy or procedures take into account non-academic issues into consideration (i.e. social/emotional readiness, size, etc.).

Yes No

The policy or procedures include a feedback loop and appeals process.

Yes No

Please include any other comments here about your district's acceleration policy and or procedure:

APPENDIX B

Content Validation of Survey Instrument

Instructions

Below are three sections of the survey that I have created. The sections are: Gifted education practices Attitudes and Beliefs Towards Acceleration Acceleration Policies and Procedures I ask that you review each question and rate it at follows: 1= Question meaning is clear. 0= Neutral -1= Question meaning is not clear. In addition to the ratings, I have included a section for you to record and comments regarding each of the sections.

Gifted Education Practices

Grade Skipping, also known as whole grade acceleration, occurs when a student is placed in a grade placement above his same age peers. This acceleration practice can occur at the beginning or during the school year. How often does the practice of grade skipping occur in your school or district?

1=Never 4=Occasionally, less than 3% of the gifted population being grade skipped each year. 7=On a regular basis with more than 5% of the gifted population being grade skipped each year. 1 2 3 4 5 6 7

- 1
- 0
- 1

Subject matter acceleration allows students to be placed with classes with older peers (or materials from those classes) for some of the school day. The students may physically attend this class, or may use the materials/assignment from the higher grade placement for some of the school day. How often does the practice of subject matter acceleration occur in your school or district?

1= Never 4= Occasionally, with less than 5% of the gifted population being subject matter accelerated each year 7= On a regular basis with more than 10% of the gifted population being subject matter accelerated each year 1 2 3 4 5 6 7

- 1
- 0
- 1

Curriculum compacting is the practice of reducing the amount of introductory activities, drill, practice and review with the time gained used for more advanced content instruction or enrichment activities. How often does the practice of curriculum compacting occur in your school or district?

1= Never 4= Occasionally, with less than 5% of the student population 7= On a regular basis with more than 10% of the total student population 1 2 3 4 5 6 7

- 1

- 0
- 1

Enrichment is the practice of using activities to broaden the lives of gifted students. How often does your district/school employ this strategy?

1= Never 4= Occasionally , with less than 5% of the total student population 7=On a regular basis with more than 10% of the total student population 1 2 3 4 5 6 7

- 1
- 0
- 1

Ability grouping is the practice of placing gifted students in special homogeneous classes with a challenging curricula. How often does your district/school employ this strategy?

1= Never 4=Occasionally, with 25% or less of the gifted population 7=On a regular basis with more than 50% of the gifted population 1 2 3 4 5 6 7

- 1
- 0
- 1

Comments regarding "Gifted Education Practices" section of the survey

Attitudes and Beliefs Towards Acceleration

The survey asks "Please rate the following statements regarding acceleration based on the following scale: 7 Strongly Agree 6 Agree 5 Somewhat Agree 4 Neutral 3 Somewhat Disagree 2 Disagree 1 Strongly Disagree"

Acceleration is a research-based practice that is highly effective for gifted students.

- 1
- 0
- 1

Students who are accelerated will have grades equal to or greater than students of the same ability level who were not accelerated.

- 1
- 0
- 1

Students who are accelerated will have lower grades than students of the same ability level who were not accelerated.

- 1
- 0
- 1

Students who are accelerated will experience academic burn out.

- 1
- 0
- 1

I am confident in my school's/district's ability to identify students who are in need of acceleration.

- 1
- 0
- 1

I am not confident in my school's/district's ability to identify students who are in need of acceleration.

- 1
- 0
- 1

I believe that gifted students should be given the opportunity of academic acceleration.

- 1
- 0
- 1

I do not agree with the practice of academic acceleration for gifted students.

- 1
- 0
- 1

Gifted students can have their social needs met when educated with older students.

- 1
- 0
- 1

Gifted students who are accelerated are well adjusted emotionally.

- 1
- 0
- 1

Gifted students who are accelerated are well adjusted socially.

- 1
- 0
- 1

Gifted students have their social needs met best when educated with their same age peers.

- 1
- 0
- 1

Acceleration is harmful to a student's emotional well being.

- 1
- 0
- 1

Acceleration is harmful to a student's social well being.

- 1
- 0
- 1

Gifted students who are accelerated are more likely to experience anxiety.

- 1
- 0
- 1

Being educated with older students is harmful to social-emotional development of the student.

- 1
- 0
- 1

It is important to consider the needs of all learners, including gifted students.

- 1
- 0
- 1

It is more important to focus on the needs of all of the students in my school/district, rather than focus efforts on the acceleration of a few students.

- 1
- 0
- 1

Students who are accelerated can easily master content and skills that they are accelerated through.

- 1
- 0
- 1

Students who are accelerated will have gaps in their knowledge and skills.

- 1

- 0
- 1

I would not recommend acceleration because I have witnessed a previous failed acceleration attempt.

- 1
- 0
- 1

I would recommend acceleration because I have witnessed a previous successful acceleration.

- 1
- 0
- 1

Acceleration forces children to grow up too fast.

- 1
- 0
- 1

Academic acceleration is an appropriate strategy for some gifted students.

- 1
- 0
- 1

Comments about the "Attitudes and Beliefs toward Acceleration" section of this survey.

Acceleration Policies and Procedures

Are you familiar with the 2009 recommendations from the National Work Group on Acceleration that recommended each school district have a written acceleration policy?

Yes No

- 1
- 0
- 1

Does your school district have an acceleration policy or procedure?

Yes No

- 1
- 0
- 1

If yes, please answer the following questions:

The policy or procedures allow for any student to be considered for acceleration.

Yes No

- 1
- 0
- 1

The policy or procedures provide systematic procedures for the implementation of acceleration.

Yes No

- 1
- 0
- 1

The policy or procedures take into account non-academic issues into consideration (i.e. social/emotional readiness, size, etc.).

Yes No

- 1
- 0
- 1

The policy or procedures include a feedback loop and appeals process.

Yes No

- 1
- 0
- 1

Comments regarding the "Acceleration Policy and Procedure" section of the survey:

--

APPENDIX C

Pilot Survey

Thank for your willingness to take this survey that is part of my doctoral dissertation study through Southwest Baptist University. Before starting this survey, please note:

- Participation in the study is completely voluntary. You may stop participating at any point without penalty. You need not answer all of the questions.
- Your answers will be kept confidential. Results will be presented to others in summary form only, without names or other identifying information.
- Your participation will take approximately 10-15 minutes. During this time you will answer demographic question questions about the elementary gifted education practices in your district, as well as your perspective on the practice of acceleration. The final questions will allow you to self-report about acceleration policy and procedures in your school district.

If you have any questions, you may contact me at 573-692-0050.

Thank you for your participation. Sincerely, Lori Sallee Southwest Baptist University

Years of experience in education

1. <5 years
2. 5-9 years
3. 10-15 years
4. 15-20 years
5. 20+ years

Highest Degree Obtained

1. Bachelors
2. Masters
3. Specialist
4. Doctorate

Enrollment Size of School District

1. < 200
2. 201-500
3. 501-1500
4. 1501-4000
5. 4001-10,000
6. >10,001

Type/Location of School District

1. Rural
2. Town

- 3. 3. Suburban
- 4. 4. Urban

Position

- 1. 1. Superintendent
- 2. 2. Assistant Superintendent
- 3. 3. Director
- 4. 4. Principal
- 5. 5. Assistant Principal
- 6. 6. Other

My school district has a state approved elementary gifted education program

- 1. 1. Yes
- 2. 2. No

Grade Skipping, also known as whole grade acceleration, occurs when a student is placed in a grade placement above his same age peers. This acceleration practice can occur at the beginning or during the school year.

How often does the practice of grade skipping occur in your school or district?

1= Never

4=Occasionally, less than 3% of the gifted population being grade skipped each year.

7=On a regular basis with more than 5% of the gifted population being grade skipped each year.

- 1. 1. 1
- 2. 2. 2
- 3. 3. 3
- 4. 4. 4
- 5. 5. 5
- 6. 6. 6
- 7. 7. 7

Subject matter acceleration allows students to be placed in classes with older peers (or materials from those classes) for some school day. The students may physically attend this class, or may use the materials/assignment from the higher grade placement for some of the school day. How often does the practice of subject matter acceleration occur in your school or district?

1=Never

4=Occasionally, with less than 10% of the gifted population being subject matter accelerated each year.

7= On a regular basis with more than 10% of the gifted population being subject matter accelerated each year.

- 1. 1. 1
- 2. 2. 2
- 3. 3. 3
- 4. 4. 4
- 5. 5. 5
- 6. 6. 6
- 7. 7. 7

Curriculum Compacting is the practice of reducing the amount of introductory activities, drill, practice and review. The time gained is used for more advanced content instruction or enrichment activities. How often does the practice of curriculum compacting occur in your school or district?

1= Never

4= Occasionally, with less than 5% of the student population

7= On a regular basis, with more than 5% of the total student population.

- | | | |
|----|----|---|
| 1. | 1. | 1 |
| 2. | 2. | 2 |
| 3. | 3. | 3 |
| 4. | 4. | 4 |
| 5. | 5. | 5 |
| 6. | 6. | 6 |
| 7. | 7. | 7 |

Enrichment is the practice of using activities to broaden the lives of gifted students.

How often does your district/school employ this strategy?

1=Never

4=Occasionally, with less than 5% of the total student population

7=On a regular basis with more than 5% of the total student population

- | | | |
|----|----|---|
| 1. | 1. | 1 |
| 2. | 2. | 2 |
| 3. | 3. | 3 |
| 4. | 4. | 4 |
| 5. | 5. | 5 |
| 6. | 6. | 6 |
| 7. | 7. | 7 |

Ability grouping is the practice of placing gifted students in special homogeneous classes with a challenging curricula.

How often does your district/school employ this strategy?

1= Never

4= Occasionally, with 25% or less of the gifted population

7= On a regular basis with more than 25% of the gifted population.

- | | | |
|----|----|---|
| 1. | 1. | 1 |
| 2. | 2. | 2 |
| 3. | 3. | 3 |
| 4. | 4. | 4 |
| 5. | 5. | 5 |
| 6. | 6. | 6 |
| 7. | 7. | 7 |

Please rate the following statements regarding acceleration based on the following scale:

7 Strongly Agree

6 Agree

5 Somewhat Agree

4 Neutral

3 Somewhat Disagree

2 Disagree

1 Strongly Disagree

I believe that gifted students should be given the opportunity of academic acceleration.

- | | | |
|----|----|---|
| 1. | 1. | 7 |
| 2. | 2. | 6 |
| 3. | 3. | 5 |
| 4. | 4. | 4 |
| 5. | 5. | 3 |
| 6. | 6. | 2 |
| 7. | 7. | 1 |

Students who are accelerated will have lower grades than students of the same ability level that were not accelerated.

- | | | |
|----|----|---|
| 1. | 1. | 7 |
| 2. | 2. | 6 |
| 3. | 3. | 5 |
| 4. | 4. | 4 |
| 5. | 5. | 3 |
| 6. | 6. | 2 |
| 7. | 7. | 1 |

Gifted students can have their social needs met when educated with older students.

- | | | |
|----|----|---|
| 1. | 1. | 7 |
| 2. | 2. | 6 |
| 3. | 3. | 5 |
| 4. | 4. | 4 |
| 5. | 5. | 3 |
| 6. | 6. | 2 |
| 7. | 7. | 1 |

Acceleration is a research-based practice that is highly effective for gifted students.

- | | | |
|----|----|---|
| 1. | 1. | 7 |
| 2. | 2. | 6 |
| 3. | 3. | 5 |
| 4. | 4. | 4 |
| 5. | 5. | 3 |
| 6. | 6. | 2 |
| 7. | 7. | 1 |

Acceleration is harmful to a student's emotional well-being.

- | | | |
|----|----|---|
| 1. | 1. | 7 |
| 2. | 2. | 6 |
| 3. | 3. | 5 |
| 4. | 4. | 4 |
| 5. | 5. | 3 |
| 6. | 6. | 2 |

7. 7. 1

I would recommend acceleration because I have witnessed a previous successful acceleration.

1. 1. 7
2. 2. 6
3. 3. 5
4. 4. 4
5. 5. 3
6. 6. 2
7. 7. 1

Students who are accelerated will have grades equal to or greater than students of the same ability level that were not accelerated.

1. 1. 7
2. 2. 6
3. 3. 5
4. 4. 4
5. 5. 3
6. 6. 2
7. 7. 1

Being educated with older students is harmful to the the social-emotional development of the student.

1. 1. 7
2. 2. 6
3. 3. 5
4. 4. 4
5. 5. 3
6. 6. 2
7. 7. 1

I am confident in my school's/district's ability to identify students who are in need of acceleration.

1. 1. 7
2. 2. 6
3. 3. 5
4. 4. 4
5. 5. 3
6. 6. 2
7. 7. 1

Acceleration is harmful to a student's social well-being.

1. 1. 7
2. 2. 6
3. 3. 5

4.	4.	4
5.	5.	3
6.	6.	2
7.	7.	1

Acceleration is an appropriate strategy for some gifted students.

1.	1.	7
2.	2.	6
3.	3.	5
4.	4.	4
5.	5.	3
6.	6.	2
7.	7.	1

It is important to consider the needs of all learners, including gifted students.

1.	1.	7
2.	2.	6
3.	3.	5
4.	4.	4
5.	5.	3
6.	6.	2
7.	7.	1

Gifted students who are accelerated are more likely to experience anxiety.

1.	1.	7
2.	2.	6
3.	3.	5
4.	4.	4
5.	5.	3
6.	6.	2
7.	7.	1

Students who are not accelerated will experience academic burn out.

1.	1.	7
2.	2.	6
3.	3.	5
4.	4.	4
5.	5.	3
6.	6.	2
7.	7.	1

Gifted students who are accelerated are well adjusted socially.

1.	1.	7
2.	2.	6

3.	3.	5
4.	4.	4
5.	5.	3
6.	6.	2
7.	7.	1

It is more important to focus on the needs of all of the students in my school/district, rather than focus efforts on the accelerated few students.

1.	1.	7
2.	2.	6
3.	3.	5
4.	4.	4
5.	5.	3
6.	6.	2
7.	7.	1

Gifted students who are accelerated are well adjusted emotionally.

1.	1.	7
2.	2.	6
3.	3.	5
4.	4.	4
5.	5.	3
6.	6.	2
7.	7.	1

Students who are accelerated will not have gaps in their knowledge and skills.

1.	1.	7
2.	2.	6
3.	3.	5
4.	4.	4
5.	5.	3
6.	6.	2
7.	7.	1

I am not confident in my school's/district's ability to identify students who are in need of acceleration.

1.	1.	7
2.	2.	6
3.	3.	5
4.	4.	4
5.	5.	3
6.	6.	2
7.	7.	1

Gifted students have their social needs met best when educated with their same age peers.

1.	1.	7
2.	2.	6
3.	3.	5
4.	4.	4
5.	5.	3
6.	6.	2
7.	7.	1

Students who are accelerated will have gaps in their knowledge and skills.

1.	1.	7
2.	2.	6
3.	3.	5
4.	4.	4
5.	5.	3
6.	6.	2
7.	7.	1

I do not agree with the practice of academic acceleration for gifted students.

1.	1.	7
2.	2.	6
3.	3.	5
4.	4.	4
5.	5.	3
6.	6.	2
7.	7.	1

I would not recommend acceleration because I have witnessed a previous failed acceleration attempt.

1.	1.	7
2.	2.	6
3.	3.	5
4.	4.	4
5.	5.	3
6.	6.	2
7.	7.	1

Acceleration forces children to grow up too fast.

1.	1.	7
2.	2.	6
3.	3.	5
4.	4.	4
5.	5.	3
6.	6.	2
7.	7.	1

Are you familiar with the 2009 recommendations from the National Work Group on Acceleration that recommended each school district have a written acceleration policy?

- 1. 1. Yes
- 2. 2. No

Does your school or school district have an acceleration policy or procedure?

- 1. 1. Yes
- 2. 2. No

The policy or procedures allow for any student to be considered for acceleration.

- 1. 1. Yes
- 2. 2. No

The policy or procedures provide systematic procedures for the implementation of acceleration.

- 1. 1. Yes
- 2. 2. No

What factors does the policy or procedure require to be taken into consideration (check all that apply)?

- 1. 1. Academic achievement
- 2. 2. Ability
- 3. 3. Aptitude
- 4. 4. Social/Emotional Readiness
- 5. 5. Physical Size
- 6. 6. Interpersonal skills
- 7. 7. Other

The policy or procedures include a feedback loop an appeals process.

- 1. 1. Yes
- 2. 2. No

Please include any other comments about your district's acceleration policy and/or procedure:

APPENDIX D

Final Survey

Thank for your willingness to take this survey that is part of my doctoral dissertation study through Southwest Baptist University. Before starting this survey, please note:

- Participation in the study is completely voluntary. You may stop participating at any point without penalty. You need not answer all of the questions.
- Your answers will be kept confidential. Results will be presented to others in summary form only, without names or other identifying information.
- Your participation will take approximately 5-10 minutes. During this time you will answer demographic questions about the elementary gifted education practices in your district, as well as your perspective on the practice of acceleration. The final questions will allow you to self-report about acceleration policy and procedures in your school district.

If you have any questions, you may contact me at 573-692-0050. Thank you for your participation.

Sincerely,

Lori Sallee

Southwest Baptist University

Years of experience in education

- | | | |
|-----|----|-------------|
| 6. | 1. | <5 years |
| 7. | 2. | 5-9 years |
| 8. | 3. | 10-15 years |
| 9. | 4. | 15-20 years |
| 10. | 5. | 20+ years |

Highest Degree Obtained

- | | | |
|----|----|------------|
| 5. | 1. | Bachelors |
| 6. | 2. | Masters |
| 7. | 3. | Specialist |
| 8. | 4. | Doctorate |

Enrollment Size of School District

- | | | |
|-----|----|-------------|
| 7. | 1. | < 200 |
| 8. | 2. | 201-500 |
| 9. | 3. | 501-1500 |
| 10. | 4. | 1501-4000 |
| 11. | 5. | 4001-10,000 |
| 12. | 6. | >10,001 |

Type/Location of School District

- | | | |
|----|----|----------|
| 5. | 1. | Rural |
| 6. | 2. | Town |
| 7. | 3. | Suburban |

8. 4. Urban

Position

- 7. 1. Superintendent
- 8. 2. Assistant Superintendent
- 9. 3. Director
- 10. 4. Principal
- 11. 5. Assistant Principal
- 12. 6. Other

My school district has a state approved elementary gifted education program

- 3. 1. Yes
- 4. 2. No

Grade Skipping, also known as whole grade acceleration, occurs when a student is placed in a grade placement above his same age peers. This acceleration practice can occur at the beginning or during the school year.

How often does the practice of grade skipping occur in your school or district?

1= Never

4=Occasionally, less than 3% of the gifted population being grade skipped each year.

7=On a regular basis with more than 5% of the gifted population being grade skipped each year.

- 8. 1. 1
- 9. 2. 2
- 10. 3. 3
- 11. 4. 4
- 12. 5. 5
- 13. 6. 6
- 14. 7. 7

Subject matter acceleration allows students to be placed in classes with older peers (or materials from those classes) for some of the school day. The students may physically attend this class, or may use the materials/assignment from the higher grade placement some of the school day. How often does the practice of subject matter acceleration occur in your school or district?

1=Never

4=Occasionally, with less than 10% of the gifted population being subject matter accelerated each year.

7= On a regular basis with more than 10% of the gifted population being subject matter accelerated each year.

- 8. 1. 1
- 9. 2. 2
- 10. 3. 3
- 11. 4. 4
- 12. 5. 5
- 13. 6. 6
- 14. 7. 7

Curriculum Compacting is the practice of reducing the amount of introductory activities, drill, practice and review. The time gained is used for more advanced content instruction or enrichment activities. How often does the practice of

curriculum compacting occur in your school or district? 1= Never
4= Occasionally, with less than 5% of the student population
7= On a regular basis, with more than 5% of the total student population.

- | | | |
|-----|----|---|
| 8. | 1. | 1 |
| 9. | 2. | 2 |
| 10. | 3. | 3 |
| 11. | 4. | 4 |
| 12. | 5. | 5 |
| 13. | 6. | 6 |
| 14. | 7. | 7 |

Enrichment is the practice of using activities to broaden the lives of gifted students.
How often does your district/school employ this strategy?

1=Never
4=Occasionally, with less than 5% of the total student population
7=On a regular basis with more than 5% of the total student population

- | | | |
|-----|----|---|
| 8. | 1. | 1 |
| 9. | 2. | 2 |
| 10. | 3. | 3 |
| 11. | 4. | 4 |
| 12. | 5. | 5 |
| 13. | 6. | 6 |
| 14. | 7. | 7 |

Ability grouping is the practice of placing gifted students in special homogeneous classes with a challenging curricula.
How often does your district/school employ this strategy?

1= Never
4= Occasionally, with 25% or less of the gifted population
7= On a regular basis with more than 25% of the gifted population.

- | | | |
|-----|----|---|
| 8. | 1. | 1 |
| 9. | 2. | 2 |
| 10. | 3. | 3 |
| 11. | 4. | 4 |
| 12. | 5. | 5 |
| 13. | 6. | 6 |
| 14. | 7. | 7 |

Please rate the following statements regarding acceleration based on the following scale:

- 7 Strongly Agree
- 6 Agree
- 5 Somewhat Agree
- 4 Neutral
- 3 Somewhat Disagree
- 2 Disagree
- 1 Strongly Disagree

I believe that gifted students should be given the opportunity of academic acceleration.

8.	1.	7
9.	2.	6
10.	3.	5
11.	4.	4
12.	5.	3
13.	6.	2
14.	7.	1

Students who are accelerated will have lower grades than students of the same ability level that were not accelerated.

8.	1.	7
9.	2.	6
10.	3.	5
11.	4.	4
12.	5.	3
13.	6.	2
14.	7.	1

Gifted students can have their social needs met when educated with older students.

8.	1.	7
9.	2.	6
10.	3.	5
11.	4.	4
12.	5.	3
13.	6.	2
14.	7.	1

Acceleration is a research-based practice that is highly effective for gifted students.

8.	1.	7
9.	2.	6
10.	3.	5
11.	4.	4
12.	5.	3
13.	6.	2
14.	7.	1

Acceleration is harmful to a student's emotional well-being.

8.	1.	7
9.	2.	6
10.	3.	5
11.	4.	4
12.	5.	3
13.	6.	2
14.	7.	1

I would recommend acceleration because I have witnessed a previous successful acceleration.

8.	1.	7
9.	2.	6
10.	3.	5
11.	4.	4
12.	5.	3
13.	6.	2
14.	7.	1

Students who are accelerated will have grades equal to or greater than students of the same ability level that were not accelerated.

8.	1.	7
9.	2.	6
10.	3.	5
11.	4.	4
12.	5.	3
13.	6.	2
14.	7.	1

Being educated with older students is harmful to the the social-emotional development of the student.

8.	1.	7
9.	2.	6
10.	3.	5
11.	4.	4
12.	5.	3
13.	6.	2
14.	7.	1

I am confident in my school's/district's ability to identify students who are in need of acceleration.

8.	1.	7
9.	2.	6
10.	3.	5
11.	4.	4
12.	5.	3
13.	6.	2
14.	7.	1

Acceleration is harmful to a student's social well-being.

8.	1.	7
9.	2.	6
10.	3.	5
11.	4.	4
12.	5.	3
13.	6.	2

14. 7. 1

Acceleration is an appropriate strategy for some gifted students.

8. 1. 7
9. 2. 6
10. 3. 5
11. 4. 4
12. 5. 3
13. 6. 2
14. 7. 1

It is important to consider the needs of all learners, including gifted students.

8. 1. 7
9. 2. 6
10. 3. 5
11. 4. 4
12. 5. 3
13. 6. 2
14. 7. 1

Gifted students who are accelerated are likely to experience anxiety.

8. 1. 7
9. 2. 6
10. 3. 5
11. 4. 4
12. 5. 3
13. 6. 2
14. 7. 1

Students who are accelerated will experience academic burn out.

8. 1. 7
9. 2. 6
10. 3. 5
11. 4. 4
12. 5. 3
13. 6. 2
14. 7. 1

Gifted students who are accelerated are socially well adjusted.

8. 1. 7
9. 2. 6
10. 3. 5
11. 4. 4
12. 5. 3

13. 6. 2
14. 7. 1

It is more important to focus on the needs of all of the students in my school/district, rather than focus efforts on the acceleration of a few students.

8. 1. 7
9. 2. 6
10. 3. 5
11. 4. 4
12. 5. 3
13. 6. 2
14. 7. 1

Gifted students who are accelerated are emotionally well adjusted.

8. 1. 7
9. 2. 6
10. 3. 5
11. 4. 4
12. 5. 3
13. 6. 2
14. 7. 1

Students who are accelerated will not have gaps in their knowledge and skills despite skipping grade level content.

8. 1. 7
9. 2. 6
10. 3. 5
11. 4. 4
12. 5. 3
13. 6. 2
14. 7. 1

I am not confident in my school's/district's ability to identify students who are in need of acceleration.

8. 1. 7
9. 2. 6
10. 3. 5
11. 4. 4
12. 5. 3
13. 6. 2
14. 7. 1

Gifted students have their social needs met best when educated with their same age peers.

8. 1. 7
9. 2. 6
10. 3. 5

11. 4.	4
12. 5.	3
13. 6.	2
14. 7.	1

Students who are accelerated will have gaps in their knowledge and skills, due to skipping grade level content.

8. 1.	7
9. 2.	6
10. 3.	5
11. 4.	4
12. 5.	3
13. 6.	2
14. 7.	1

I do not agree with the practice of academic acceleration for gifted students.

8. 1.	7
9. 2.	6
10. 3.	5
11. 4.	4
12. 5.	3
13. 6.	2
14. 7.	1

I would not recommend acceleration because I have witnessed a previous failed acceleration attempt.

8. 1.	7
9. 2.	6
10. 3.	5
11. 4.	4
12. 5.	3
13. 6.	2
14. 7.	1

Acceleration forces children to grow up too fast.

8. 1.	7
9. 2.	6
10. 3.	5
11. 4.	4
12. 5.	3
13. 6.	2
14. 7.	1

Are you familiar with the 2009 recommendations from the National Work Group on Acceleration that recommended each school district have a written acceleration policy?

3. 1.	Yes
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4. 2. No

Does your school or school district have an acceleration policy or procedure?

3. 1. Yes

4. 2. No

The policy or procedures allow for any student to be considered for acceleration.

3. 1. Yes

4. 2. No

The policy or procedures provide systematic procedures for the implementation of acceleration.

3. 1. Yes

4. 2. No

What factors does the policy or procedure require to be taken into consideration (check all that apply)?

8. 1. Academic achievement

9. 2. Ability

10. 3. Aptitude

11. 4. Social/Emotional Readiness

12. 5. Physical Size

13. 6. Interpersonal skills

14. 7. Other

The policy or procedures include a feedback loop an appeals process.

3. 1. Yes

4. 2. No

Please include any other comments about your district's acceleration policy and/or procedure:

APPENDIX E

Survey Cover Letter/Informed Consent

Dear Colleague:

I am a Doctoral Student attending Southwest Baptist University in Bolivar, Missouri, and I am participating in the Doctor of Education in Educational Leadership program. As a final part of the program, I am completing my doctoral dissertation on the acceleration of elementary gifted students in the state of Missouri. The study focuses on administrator attitudes and beliefs regarding the practice of acceleration. The included survey has been developed to collect information about this topic. This survey has 38 questions and is divided into four sections: demographics, gifted practices, beliefs and attitudes towards acceleration, and acceleration policy and procedures.

Your privacy is important; your answers will be combined with other participants and reported in aggregate form. Information reported will not indicate individual participants or school districts. There is no penalty should you choose not to participate or answer all of the questions. Your completion and submission of the survey will indicate your consent to participate and permission to use the information that you have provided in my study.

Before you make a final decision about participation, please read the following statements about how your responses will be used and how your rights as a participant will be protected:

- Participation in the study is completely voluntary. You may stop participating at any point without penalty. You need not answer all of the questions.
- Your answers will be kept confidential. Results will be presented to others in summary form only, without names or other identifying information.
- Your participation will take approximately 10-15 minutes. During this time you will answer demographic questions, questions about the elementary gifted education practices in your district, as well as your perspective on the practice of acceleration. The final questions will allow you to self-report about acceleration policy and procedures in your school district.

Sincerely,

Lori Sallee
Southwest Baptist University

APPENDIX F

Index of Item-Objective Congruency

Survey Statement	Index
Grade Skipping, also known as whole grade acceleration, occurs when a student is placed in a grade placement above his same age peers. This acceleration practice can occur at the beginning or during the school year. How often does the practice of grade skipping occur in your school or district?	1.0
Subject matter acceleration allows students to be placed with classes with older peers (or materials from those classes) for some of the school day. The students may physically attend this class, or may use the materials/assignment from the higher grade placement for some of the school day. How often does the practice of subject matter acceleration occur in your school or district?	1.0
Curriculum compacting is the practice of reducing the amount of introductory activities, drill, practice and review with the time gained used for more advanced content instruction or enrichment activities. How often does the practice of curriculum compacting occur in your school or district?	0.6
Enrichment is the practice of using activities to broaden the lives of gifted students. How often does your district/school employ this strategy?	1.0
Ability grouping is the practice of placing gifted students in special homogeneous classes with a challenging curricula. How	1.0

often does your district/school employ this strategy?

Acceleration is a research-based practice that is highly effective for gifted students. 0.8

Students who are accelerated will have grades equal to or greater than students of the same ability level who were not accelerated. 0.8

Students who are accelerated will have lower grades than students of the same ability level who were not accelerated. 1.0

Students who are accelerated will experience academic burn out. 1.0

I am confident in my school's/district's ability to identify students who are in need of acceleration. 1.0

I am not confident in my school's/district's ability to identify students who are in need of acceleration. 1.0

I believe that gifted students should be given the opportunity of academic acceleration. 1.0

I believe that gifted students should be given the opportunity of academic acceleration. 1.0

Gifted students can have their social needs met when educated with older students. 1.0

Gifted students can have their social needs met when educated with older students. 1.0

Gifted students who are accelerated are well adjusted emotionally.	1.0
Gifted students who are accelerated are well adjusted socially.	1.0
Gifted students have their social needs met best when educated with their same age peers.	1.0
Acceleration is harmful to a student's emotional well being.	1.0
Acceleration is harmful to a student's social well being.	1.0
Gifted students who are accelerated are more likely to experience anxiety.	1.0
Being educated with older students is harmful to social-emotional development of the student.	1.0
Being educated with older students is harmful to social-emotional development of the student.	1.0
It is more important to focus on the needs of all of the students in my school/district, rather than focus efforts on the acceleration of a few students.	1.0
It is more important to focus on the needs of all of the students in my school/district, rather than focus efforts on the acceleration of a few students.	0.0
Students who are accelerated will have gaps in their knowledge and skills.	1.0

I would not recommend acceleration because I have witnessed a previous failed acceleration attempt.	1.0
I would recommend acceleration because I have witnessed a previous successful acceleration.	1.0
Acceleration forces children to grow up too fast.	0.6
Academic acceleration is an appropriate strategy for some gifted students.	1.0
Are you familiar with the 2009 recommendations from the National Work Group on Acceleration that recommended each school district have a written acceleration policy?	0.6
Does your school district have an acceleration policy or procedure?	1.0
The policy or procedures allow for any student to be considered for acceleration.	0.6
The policy or procedures provide systematic procedures for the implementation of acceleration.	0.6
The policy or procedures take into account non-academic issues into consideration (i.e. social/emotional readiness, size, etc.).	0.0
The policy or procedures include a feedback loop and appeals process.	0.6

APPENDIX G

Validity Pilot Factor Analysis

Survey Statement	Factor Analysis
I believe that gifted students should be given the opportunity of academic acceleration.	.586
Students who are accelerated will have lower grades than students of the same ability level that were not accelerated.	-.419
Gifted students can have their social needs met when educated with older students.	.809
Acceleration is a research-based practice that is highly effective for gifted students.	.570
Acceleration is harmful to a student's emotional well-being.	.866
I would recommend acceleration because I have witnessed a previous successful acceleration.	.838
Students who are accelerated will have grades equal to or greater than students of the same ability level that were not accelerated.	.910
Being educated with older students is harmful to the social-emotional development of the student.	.739
I am confident in my school's/district's ability to identify students who are in need of acceleration.	.199

Acceleration is harmful to a student's social well-being.	.762
Acceleration is an appropriate strategy for some gifted students.	.533
It is important to consider the needs of all learners, including the gifted students.	.681
Gifted students who are accelerated are more likely to experience anxiety.	.188
Students who are not accelerated will experience academic burn out.	-.215
Gifted students who are accelerated are well adjusted socially.	.489
	.430
It is more important to focus on the needs of all of the students in my school/district, rather than focus efforts on the education of just a few.	
Gifted students who are accelerated are well adjusted emotionally.	.198
	-.159
Students who are accelerated will not have gaps in their knowledge and skills.	
I am not confident in my school's district's ability to identify students who are in need of acceleration.	.087
Gifted students have their social needs met best when educated with their same age peers.	.532
Students who are accelerated will have gaps in their knowledge and skills.	.196
I do not agree with the practice of academic acceleration for gifted students.	.604

I would not recommend acceleration because I have witnessed a previous failed acceleration attempt.	.816
Acceleration forces children to grow up too fast.	.809

APPENDIX H

Final Survey Factorial Analysis

Survey Statement	Factor Analysis
I believe that gifted students should be given the opportunity of academic acceleration.	.662
Students who are accelerated will have lower grades than students of the same ability level that were not accelerated.	.555
Gifted students can have their social needs met when educated with older students.	.618
Acceleration is a research-based practice that is highly effective for gifted students.	.801
Acceleration is harmful to a student's emotional well-being.	.821
I would recommend acceleration because I have witnessed a previous successful acceleration.	.780
Students who are accelerated will have grades equal to or greater than students of the same ability level that were not accelerated.	.639
Being educated with older students is harmful to the social-emotional development of the student.	.794
I am confident in my school's/district's ability to identify students who are in need of acceleration.	-.034
Acceleration is harmful to a student's social well-being.	-.853

Acceleration is an appropriate strategy for some gifted students.	-.799
It is important to consider the needs of all learners, including the gifted students.	.146
Gifted students who are accelerated are more likely to experience anxiety.	.548
Students who are accelerated will experience academic burn out.	.668
Gifted Students who are accelerated are socially well adjusted.	.749
It is more important to focus on the needs of all of the students in my school/district, rather than focus efforts on the education of just a few.	.312
Gifted students who are accelerated are emotionally well adjusted.	.626
Students who are accelerated will not have gaps in their knowledge and skills despite skipping grade level content.	.242
I am not confident in my school's district's ability to identify students who are in need of acceleration.	.175
Gifted students have their social needs met best when educated with their same age peers.	-.693
Students who are accelerated will have gaps in their knowledge and skills, due to skipping grade level content.	.420
I do not agree with the practice of academic acceleration for gifted students.	.888
	.685
I would not recommend acceleration because I have witnessed a previous failed	

acceleration attempt.

Acceleration forces children to grow up too fast. .831
