School Administrators and the Professional Learning of General Education Teachers Related to Gifted Education: A Delphi Study

Lenore Cortina

Seton Hall University

Follow this and additional works at: http://scholarship.shu.edu/dissertations

Part of the Educational Administration and Supervision Commons, Gifted Education Commons, Special Education and Teaching Commons, and the Teacher Education and Professional Development Commons

Recommended Citation


http://scholarship.shu.edu/dissertations/1421
SCHOOL ADMINISTRATORS AND THE PROFESSIONAL LEARNING OF
GENERAL EDUCATION TEACHERS RELATED TO GIFTED EDUCATION:
A DELPHI STUDY

BY
LENORE CORTINA

Dissertation Committee

Christopher Tienken, Ed.D., Mentor
Charles M. Achilles, Ed.D., Committee Member
Sally M. Reis, Ph.D., Committee Member
Rebecca Hutto, Ed.D., Committee Member

Submitted in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education
Seton Hall University
2011
Doctoral Candidate, Lenore Cortina, has successfully defended and made the required modifications to the text of the doctoral dissertation for the Ed.D. during this Spring Semester 2011.

The mentor and any other committee members who wish to review revisions will sign and date this document only when revisions have been completed. Please return this form to the Office of Graduate Studies, where it will be placed in the candidate's file and submit a copy with your final dissertation to be bound as page number two.
Abstract

School Administrators and the Professional Learning of General Education Teachers Related to Gifted Education: A Delphi Study

General education teachers have limited opportunities for professional learning that is designed to develop their capacity to differentiate curriculum and instruction adequately for gifted students. Administrators’ decisions related to professional learning for general education teachers in gifted education are influenced by many factors. This qualitative descriptive case study used a Delphi methodology to identify factors that influence school administrators’ decisions, and elicited proposals for future actions to mitigate some of the negative factors related to inadequate professional learning for general education teachers in gifted education topics. Three rounds of questionnaires were delivered via a web-based service to experts in gifted education, professional development and school administration. Four themes emerged from the study: the influence of differing perspectives on the problem, the necessity of making informed decisions, the challenge that competing priorities pose for administrators, and the need for professional learning to develop general education teachers’ capacity to address the needs of all students. Findings from this study can be used to inform administrative practice, gifted education reform/advocacy efforts, and to suggest research agendas that explore some of the issues and concerns raised by the experts in this study.
Acknowledgements

My sincere thanks to Dr. Christopher Tienken, my mentor, for his guidance and support throughout the dissertation process. He challenged me at every step to expand my thinking so that I might improve the quality of this study. I will always be grateful to Dr. Tienken for stepping off the edge right beside me when I proposed using an unusual methodology. I deeply appreciate his encouragement over the last two years.

It is difficult to express in words how grateful I am to my dissertation committee who selflessly offered their time and expertise through many revisions. Thank you to Dr. Charles Achilles for his detailed edits and valuable insights. His comments directly improved the quality of the study.

Many thanks to Dr. Rebecca Hutto for allowing me the opportunity to access her expertise as a gifted educator and school administrator. Her comments kept my thinking practice-centered and focused on the relevance of the study to school administrators.

Special thanks to Dr. Sally Reis for planting a seed many years ago that grew into this accomplishment. Dr. Reis continues to be a personal and professional inspiration to me. She has been very generous with her knowledge of gifted education, encouragement and time during the dissertation process.

Many thanks to the gifted education, professional development, and school administration experts who volunteered their time and expertise to this study.

Thank you to my colleagues from Cohort XIII, who offered a collective shoulder to cry on in challenging times and were always there to celebrate successes.

Sincere thanks to my wonderful friends, who supported me with love and laughter and understood when I was too busy to play.
Dedication

This dissertation is dedicated to my family, whose love and support helped me to realize this lifelong dream.

To my parents, Alfred Van Dyken and the late Eleunore Van Dyken, who taught me that hard work is not only a responsibility, but offers immeasurable rewards. Their love and support throughout my life have given me the strength and courage to take risks. Mom, you were with me all the way.

To my children, Annie, Tony, and Matt who have made me prouder than a mother has right to be. I am inspired every day by their kindness, intelligence, humor, strength, work ethic, and courage.

To my husband, Henry, who made all of this possible. You are my closest friend and my biggest cheerleader. You have supported me in every way imaginable during our marriage, and I proudly dedicate this dissertation to you.
Table of Contents

ABSTRACT........................................................................................................ii

ACKNOWLEDGEMENTS................................................................................iv

DEDICATION.....................................................................................................v

LIST OF TABLES .............................................................................................x

LIST OF FIGURES..........................................................................................xi

CHAPTER I: INTRODUCTION TO THE PROBLEM...........................................1
  Introduction.................................................................................................1
  Background of the Problem........................................................................4
  Statement of the Problem...........................................................................7
  Purpose of the Study and Research Questions.........................................9
  Significance of the Study..........................................................................11
  Conceptual Framework.............................................................................13
  Summary of the Research Design and Methods.......................................15
  Limitations of the Study..........................................................................17
  Delimitations of the Study......................................................................18
  Definitions of Terms.................................................................................19
  Organization of the Study........................................................................21

CHAPTER II: REVIEW OF RELEVANT RESEARCH, THEORY
  AND LITERATURE.........................................................................................22
  Introduction.................................................................................................22
  Focus of the Review and Inclusion/Exclusion Criteria..............................22
  Literature Search Procedures....................................................................23
  Effect Sizes...............................................................................................23
  Delimitations of the Literature Review....................................................24
  Educational Factors that Influence Gifted Education...............................24
    Gifted Students in the General Education Classroom............................24
    Focus of Differentiation Efforts................................................................31
    Capacity of General Education Teachers................................................32
    Preservice Experiences............................................................................35
    In-service Professional Development......................................................38
    Professional Development Effectiveness...............................................40
    School Administrators and Gifted Education...........................................47
  Synthesis of Literature Related to Educational Factors..........................51
  Political Factors that Influence Gifted Education....................................53
    The Influence of No Child Left Behind Legislation...............................53
    Policy Implementation and Mandates.....................................................58
  Synthesis of Literature Related to Political Factors..................................62
  Economic Factors that Influence Gifted Education..................................63
CHAPTER III: RESEARCH DESIGN AND METHODS

Research Design.........................................................................................................94
Delphi Methodology......................................................................................................95
Rationale for Application of Delphi Method in Research Design..................................96
Research Questions......................................................................................................98
Sample........................................................................................................................100
Letters of Solicitation and Informed Consent...............................................................103
Data Collection.............................................................................................................104
  Round One................................................................................................................105
  Round Two................................................................................................................106
  Round Three............................................................................................................106
Data Analysis................................................................................................................107
  Round One................................................................................................................107
  Round Two................................................................................................................108
  Round Three............................................................................................................108
Threats to Validity..........................................................................................................108
  Threats to External Validity......................................................................................108
  Threats to Internal Validity.....................................................................................110

CHAPTER IV: RESULTS OF THE STUDY....................................................................112
Overview.......................................................................................................................112
Descriptive Characteristics of the Experts.................................................................113
Round One....................................................................................................................113
  Educational Factors...................................................................................................114
  Educational factors within subgroups......................................................................114
  Educational factor comparison between subgroups..............................................118
Political Factors...........................................................................................................119
  Political factors within subgroups.........................................................................120
  Political factor comparison between subgroups..................................................124
Economic Factors.........................................................................................................125
  Economic factors within subgroups.......................................................................125
List of Tables

Table 1: Criteria for Panel Selection.................................................................101
Table 2: Educational Factors that Influence School Administrators’
   Decisions........................................................................................................115
Table 3: Political Factors that Influence School Administrators’
   Decisions........................................................................................................121
Table 4: Economic Factors that Influence School Administrators’
   Decisions........................................................................................................126
Table 5: Social Factors that Influence School Administrators’
   Decisions........................................................................................................133
Table 6: Importance Rating of Factors by Subgroup.................................157
Table 7: Ratings of Desirability and Feasibility of Proposed Actions by
   Subgroup.........................................................................................................165
List of Figures

Figure 1: Conceptual Framework of Related Processes and Outcomes of the Delphi Study......................... 14

Figure 2: Cross-factor Responses by Subgroup.......................... 136
CHAPTER I

INTRODUCTION TO THE PROBLEM

Introduction

Educational, social, political, and economic factors outside, and within, schools influence the delivery of learning opportunities to gifted students throughout America. The continued federal focus on accountability created with the passage of the No Child Left Behind Act of 2001 (Public Law 107-110, 2002) has placed increasing pressure on school administrators to expend scarce funding and instructional time on programs and services for struggling students, in an effort to insure adequate yearly progress (Mendoza, 2006; Moon, Brighton, Jarvis & Hall, 2007; Valli & Buese, 2007). State mandates for the identification of gifted students, teacher preparation, educational services, and monitoring of gifted programs across the United States are widely disparate (Council of State Directors of Programs for the Gifted and the National Association for Gifted Children, 2009; Purcell, 1994; Schneider, 2006; Swanson, 2007). Allocation systems and levels of funding for gifted education vary widely between states, further increasing disparities in gifted programming. Without consistent federal or state policies to guide local school administrators, gifted programming in school districts across the United States operate with varied levels of service and quality.

Many gifted students, regardless of the availability of gifted programming in the local school district, spend the majority of their instructional time in general education classrooms, where they receive few differentiated learning experiences (Archambault, Westberg, Brown, Hallmark, Emmons, & Zhang, 1993; Maguire, 2008; Moon, Tomlinson, & Callahan, 1995; Westberg, Archambault, Dobyns, & Salvin, 1993;
The competing needs of students in heterogeneous classes require teachers and administrators to prioritize scarce resources of time, funding, and instructional focus. Administrators and teachers often prioritize the needs of struggling students over gifted students, a choice influenced by accountability pressures, values, teacher capacity or misconceptions of student need (Maguire 2008, Mendoza, 2006; Moon et al., 1995; Moon, Brighton, Jarvis & Hall, 2007; Valli & Buese, 2007). Teacher capacity to differentiate curriculum and instruction effectively for gifted students in the general education classroom can be limited by an incomplete, or faulty, understanding of gifted pedagogy. Teachers' pedagogical capacity related to gifted education can be influenced by a lack of pedagogical knowledge and skills specific to gifted education (Tomlinson, Brighton, Hertberg, Callahan, Moon, Brimjoin, Conover & Reynolds, 2003; Westberg et al., 1993; Westberg & Daoust, 2003), lack of an appropriate repertoire of instructional strategies for differentiation (Tomlinson, 2005), unclear understanding of gifted students' curricular needs, focus or options (Tomlinson, 2005; Tomlinson et al., 2003), an inability to modify curriculum effectively (Tomlinson et al., 2003), and resistance to change (Johnsen, Haenley, Ryser & Ford, 2002; Tomlinson et al., 2003).

Researchers have suggested that many general education teachers receive limited or no professional development focused on addressing the unique needs of these students (Archambault et al., 1993; CSDGP-NAGC, 2009; Farkas & Duffett, 2008; Gubbins, Westberg, Reis, Dinnocenti, Tieso, Muller, Park, Emerick, Maxfield & Burns, 2002). Professional development designed to increase the pedagogical knowledge and skills necessary for general education teachers to meet the social and academic needs of gifted learners effectively through differentiation of instruction and curriculum might increase
Researchers and practitioners in gifted education have made progress in identifying essential knowledge and skills for effective practice and professional development for teachers responsible for gifted education. In 1998, the National Association for Gifted Children (NAGC) developed the Pre-K-Grade 12 Gifted Program Standards to aid school personnel in evaluating programming for gifted students. Recognizing a need to prioritize teacher preparation, in 2006 the National Council for Accreditation of Teacher Education (NCATE) approved the Teacher Preparation Standards in Gifted Education which were developed jointly by the NAGC, the Council for Exceptional Children (CEC) and the Association for the Gifted (TAG). The Teacher Knowledge & Skill Standards for Gifted and Talented Education, drawn from the preparation standards, outline the essential knowledge and skills necessary for teachers to effectively teach gifted and talented students. These standards represent a consensus of experts calling for evaluation of gifted programs and comprehensive training for teachers responsible for educating gifted students.

Although the standards provide a base upon which to build and evaluate gifted programs and professional learning experiences, there is little anecdotal or empirical data to suggest that these standards are utilized by school administrators to promote or deliver quality programming for students, or professional development to general education teachers with responsibilities for the education of gifted students on a widespread scale (CSDGP-NAGC, 2009; Farkas & Duffett, 2008; Moon et al., 2007). School administrators make instructional and organizational decisions that are influenced by...
factors, both external and internal to school districts that directly or indirectly influence the education of gifted students. The influence that educational, social, political, and economic factors have on administrators’ decisions related to gifted education have seldom been explored in the published literature.

**Background of the Problem**

Progress in gifted education has historically been highly vulnerable to swings in social values and political events. Times of short-lived forward momentum due to political and economic forces that support gifted education as a means toward national growth and dominance have repeatedly succumbed to competing social or political forces that raise issues of equity and elitism (Davis & Rimm, 1998; Jolly, 2009). According to Jolly (2009), the earliest attempts at systematic acceleration in public schools for gifted students in the late 1800s raised for the first time the prospect of specialized educational programming for gifted students.

Gifted education as a discipline developed from scientific research in cognitive psychology and biology. In 1869, Sir Frances Galton published *Hereditary Genius*, in which he proposed that intelligence is dependent upon heredity (Davis & Rimm, 1998). The concept of mental age, based on Binet’s work, brought to the forefront the idea that some children’s intelligence grows and can be measurably ahead of same-age peers (Davis & Rimm, 1998). Measures of intelligence were introduced to America in the early 1900s and provided empirical evidence of differences in intellectual ability. During the 1920s and 1930s, Leta Hollingworth and Lewis Terman built upon this foundational research to develop definitions of giftedness, general characteristics, and programming options for gifted students (Jolly, 2009).
Interest in gifted education remained low from the Depression era, when equity was stressed, until the launch of the Russian satellite, Sputnik, in 1957. In the name of security and national pride, gifted education became a national priority, and the National Defense Education Act (NDEA) was passed in 1958. The NDEA provided unprecedented K-12 funding for the education of the gifted, including financial support for curriculum, materials, and professional development for teachers (Jolly, 2009). The focus on gifted education waned with the advent of the Civil Rights Movement which refocused political and educational attention on equity in education for special needs, lower socioeconomic, and minority students (Davis & Rimm, 1998; Jolly, 2009).

The release of the Marland Report in 1972 signaled a revitalization of interest in gifted education. This study focused attention once again on the need for differentiated educational experiences, and proposed a broader definition of giftedness (Marland, 1972). In 1978, Congress enacted the Gifted and Talented Children’s Education Act to fund local and state agencies for improvement of gifted education programs. However, the Education Consolidation and Improvement Act of 1981 eliminated the Office of Gifted and Talented Education, along with the financial support. In the mid-1980s, the antitracking movement gained momentum, signaling a shift back toward equity concerns. Tracking is characterized by comprehensively applied ability grouping that includes all students across entire grade levels—a practice that raised concerns that low income and minority students were disproportionately represented in low-achieving tracks (Oakes, 1990; Slavin, 1995). Ability grouping practices that are flexible and focused on specific learning needs such as within-class grouping, cluster grouping, flexible grouping, and pull-out programs can increase the achievement of gifted students (Gentry, 1999; Hong &
Hong, 2009; Kulik, 1992). The misconception that all forms of ability grouping are identical in theory and practice to tracking may still negatively influence gifted education today (CSDPG-NAGC, 2009).

In 1988, the Jacob K. Javits Gifted and Talented Students Education Act was passed to fund research and demonstration programs, with funding directed at underserved gifted populations. Levels of funding for the Javits Grant have fluctuated over the years, without designated funding for local gifted programming. The National Research Center on the Gifted and Talented, supported by funds available through the Javits program was established in 1991 to serve as a clearinghouse for information related to the education of the gifted (NRC/GT). In 1993, National Excellence: A Case for Developing America’s Talent, was released by the Department of Education, and outlined the disparities between teacher preparation and gifted programming between states. The enactment of the No Child Left Behind Act in 2002 (NCLB) has unintentionally served as a catalyst for the increased instructional focus on struggling students and consequent marginalization of gifted students (Maguire, 2008; Mendoza, 2006; Moon et al., 2007; Scot, Callahan, & Urquhart, 2009; Valli & Buese, 2007).

In light of the recent political and educational landscape, general education teacher preparation is rapidly becoming an area of concern for researchers and practitioners in gifted education. In a national survey, state directors of gifted programs identified preservice training and professional development for in-service general education teachers in gifted education as needing improvement (CSDPG-NAGC, 2009). The last century has brought significant advances in the field, including a deeper understanding of constructs of intelligence, conceptions of giftedness, programming,
identification of gifted students, and the identification of best practices in teacher
preparation. Little is known about the role of school administrators’ instructional
leadership related to gifted education, or the factors that influence administrators’
decisions in providing professional development for general education teachers in gifted
education topics.

Statement of the Problem

School leaders have the responsibility, as outlined in Standards Two and Six of
the Education Leadership Policy Standards: Interstate School Leaders Licensure
Consortium (ISLLC) 2008, to advocate and sustain a school culture and instructional
program that fosters student learning and the professional growth of teachers.
Furthermore, the Standards call for school administrators to anticipate and adjust to
possible social, political and educational trends and work toward influencing local, state
and national decisions.

Standard 2: An education leader promotes the success of every student by
advocating, nurturing, and sustaining a school culture and instructional program
conducive to student learning and staff professional growth.

Standard 6: An education leader promotes the success of every student by
understanding, responding to, and influencing the political, social, economic,
legal, and cultural context. (Council of Chief State School Officers, 2008)

Services for gifted students are most commonly delivered in general education
classrooms (CSDPG-NAGC, 2009), and some studies suggested that gifted students
encounter no differentiated curriculum and instruction in the majority of the educational
experiences in which they participate (Archambault et al., 1993; Westberg & Daoust,
Empirical research reveals a limited capacity of many general education teachers to modify and implement appropriate curriculum and instruction effectively, as well as infrequent participation in professional development in gifted education (Archambault et al., 1993; Farkas and Duffett, 2008; Gubbins et al., 2002; Westberg & Duoust, 2003). School administrators are instructional leaders; and as such, primary decision makers regarding instructional goals, programs and professional development.

A moral imperative to prepare teachers to educate gifted students to their fullest capacity is outlined in a position paper published by the National Association for Gifted Children (NAGC, 1994) that states:

...all children deserve the highest quality of instruction possible and that such instruction will only occur when teachers are aware of and able to respond to the unique qualities and characteristics of the students they instruct. Gifted and talented students present a particular challenge and often experience inadequate and inappropriate education. NAGC believes that these competencies, in addition to those required for good teaching and learning in general, such as modeling openness, curiosity, and enthusiasm, are necessary for teachers of gifted and talented students. NAGC also believes that educational experiences through comprehensive programming must be available for teachers to develop these competencies.

In a joint position statement with the National Middle School Association, the NAGC called on school leaders to:

1. Provide leadership in creating a school climate that vigorously supports both equity and excellence.
2. Ensure that teachers have meaningful knowledge and understanding about the needs of gifted adolescents, including training in differentiated instruction so that the needs of all students—including those with advanced performance or potential—are appropriately addressed (NAGC, 2010).

Empirical research investigating the factors that influence school administrators in making decisions regarding the professional learning of general education teachers related to gifted education is virtually nonexistent in the published literature. Limited research has been conducted in the field of gifted education that draws upon the expertise of noted scholars in the field, or combines this expertise with other fields to develop a broader view of the problem. Research attempting to elicit alternative options for actions that might influence the delivery of professional development in gifted topics to general education teachers in the future has not been published to this point.

**Purpose of the Study and Research Questions**

The purpose of this study is to identify and analyze factors, as perceived by experts in the domains of gifted education, professional development and school administration that might influence the decisions of school administrators related to the provision of professional learning focused on gifted education to general education teachers. The knowledge generated by this study might stimulate the promotion of professional learning in gifted education to general education teachers with a higher level of frequency at the local level than is currently accepted. The Delphi methods used in this study structure the communication between experts from related specialties within the broader discipline of education to elicit varied perspectives of the problem and
generate more alternatives for solutions than one specialty alone could produce (Mitroff & Turoff, 1975).

Four overarching research questions and four subsidiary questions frame this study:

1. What factors do gifted education, professional development and school administration experts identify as influential in school administrators’ decisions regarding the professional learning of elementary and middle school general education teachers related to the education of gifted students?
   a. What educational factors do experts perceive influence school administrators’ decisions regarding the quantity and quality of professional learning for elementary and middle school general education teachers related to gifted education?
   b. What political factors do experts perceive influence school administrators’ decisions regarding the quantity and quality of professional learning for elementary and middle school general education teachers related to gifted education?
   c. What economic factors do experts perceive influence school administrators’ decisions regarding the quantity and quality of professional learning for elementary and middle school general education teachers related to gifted education?
   d. What social factors do experts perceive influence school administrators’ decisions regarding the quantity and quality of professional learning for elementary and middle school general education teachers related to gifted education?
2. What future actions do gifted education, professional development, and school administration experts propose to mitigate negative factors and/or positively influence school administrators' decisions related to the quality and quantity of professional learning in gifted education for elementary and middle school general education teachers?

3. How do experts rate (a) the level of importance of the factors that influence school administrators' decisions and (b) the desirability and feasibility of future actions to mitigate the negative factors or positively influence school administrators' decisions related to professional learning in gifted education for elementary and middle school general education teachers?

4. In what ways, if any, do the perceptions of experts in gifted education, professional development and school administration differ, in relation to (a) the importance they place on the influential factors identified by the panel, and (b) the feasibility and desirability of future actions proposed by the panel?

**Significance of the Study**

The near absence of studies that identify the factors that influence the delivery of professional development focused on gifted issues to general elementary and middle school teachers may have contributed to the persistence of the problem. Historically, teacher preparation reform proposals have focused on three major concerns: (a) the nature of adequate qualifications for teachers, (b) the place of pedagogy in teacher preparation, and (c) specific content mastered by teachers (Dede, 1990). Gifted education advocates and researchers have focused on these concerns, and the field has developed standards for teacher preparation, programs, and practice, along with an empirical body of research.
supporting specific professional development practices. However, the absence of wide-ranging commitment to, and provision of, gifted education professional development to general education teachers continually emerges in the research and advocacy literature.

Attempts by advocacy groups and educators to address this problem through calls for federal and state policy and funding reform continue to meet with resistance and inaction. Viewing the problem of limited professional development through multiple lenses may offer a perspective that has not yet been considered. School administrators are instructional leaders and building managers who influence instructional climate, organization and practice at the local level. Empirical studies to investigate the antecedent factors that influence school administrators' decisions related to the delivery of professional development focused on gifted topics are seldom represented in the published literature.

At the conclusion of this study, school administrators should be better informed to plan and implement professional development experiences for general education teachers to meet the needs of gifted students effectively. This study will provide researchers with valuable information upon which to build a research agenda focused on the role that school administrators play in gifted education, which has been virtually ignored up until now in the extant research literature. The study will elicit, from the expert panelists, alternatives for action that might influence how the issue of the delivery of professional development in gifted education topics to general education teachers develops in the future.
Conceptual Framework

The conceptual framework for this study is based on the Kantian philosophy of scientific inquiry (Mitroff & Turoff, 1975), and the concept of complementary associations as they apply to the process of group problem analysis (Achilles, Reynolds, & Achilles, 1997). Kantian scientific inquiries are based on the premise that alternative views of the nature of the problem and the acquisition of many alternative options for the future are necessary to fully understand an issue. Kantian inquiry places a strong emphasis on acquiring many perspectives on the nature of the problem for the purpose of developing alternate models in dealing with problems. According to Mitroff and Turoff (1975), “the explicit purpose of a Kantian Delphi study is to elicit alternatives so that a comprehensive overview of the issue can take place” (p 27). Seeking ideas and informed judgments from “experts” who possess knowledge in different areas of specialization can broaden the view of the problem and solution (Mitroff & Turoff, 1975). Figure 1 illustrates the conceptual framework.

To identify the antecedent factors that influence school administrators’ decisions relative to professional development in gifted education, the concept of complementary associations (Achilles et al., 1997) in problem analysis provides a conceptual basis for the study design. Achilles et al. (1997) defined complementary associations as “the pairing or teaming of people who possess skills that when added to the group’s total potential provide a synergistic effect, which can be applied to problem analysis” (pp. 91-92). Including experts in groups for the purpose of problem analysis leads to diversity and accuracy of contributions, due to the skills experts bring to the table.
Experts are able to generate the best solutions quickly and accurately, detect patterns, and recognize the complexity of problems (Chi, 2006; Leithwood & Stager, 1989), self-monitor (Chi, 2006), choose appropriate problem-solving strategies (Chi, 2006; Leithwood & Stager 1989), are resourceful and efficient in using information to solve problems (Chi, 2006; Leithwood & Stager, 1989), and can access relevant knowledge and strategies efficiently when confronted with problems (Chi, 2006; Leithwood & Stager, 1989).

Selecting a panel of experts for the study from the fields of professional development, gifted education, and school administration brings different perspectives, strengths, and domain expertise to the problem. This complementary association of experts, whose knowledge of professional development is grounded in different educational perspectives, will broaden the view of the problem (Mitroff & Turoff, 1975),
and produce a shared understanding upon which alternative solutions can be developed (Scheele, 1975).

Summary of the Research Design and Methods

The extant literature suggests that the limited opportunities for professional development in gifted education topics for general education teachers is a persistent and pervasive problem. The factors that influence school administrators when making decisions regarding the facilitation of professional learning in gifted education have seldom been reported in the literature. Additionally, little research with a future orientation has been conducted in relation to this problem. A descriptive case study design was employed. A Delphi methodology was applied in the study to structure the collection of data related to the factors that influence decisions regarding professional development in gifted education and provide a vehicle in which to solicit proposals for future actions that may influence how this issue is resolved in the future.

Delphi methods are primarily employed in studies that are designed to investigate complex problems having more than one possible solution. The goals of the Delphi study are to identify and analyze factors that shape or influence a problem or issue. At times, the purpose of the Delphi study is to build consensus among the expert panelists, and at other times the researchers’ goal is to elicit numerous and varied alternative solutions and actions to a problem or issue (Linstone & Turoff, 1975). Due to the relative novelty and limited use of Delphi methods compared to more traditional research methodologies, revisions of the methodologies and applications of the Delphi method have steadily evolved over the years (Adler & Ziglio, 1996; Linstone & Turoff, 1975).

Since first developed and used by the Rand Corporation in 1950s, the Delphi
technique has had applications in various disciplines, including industry, government, medicine and, more recently, education. The purpose of earlier studies was to generate consensus among a group of experts. The technique has evolved beyond the search for consensus, "so that today it might be defined as a social research technique whose aim is to obtain a reliable group opinion using a group of experts. It is a method of structuring communication between a group of people who can provide valuable contributions to resolve a complex problem" (Landeta, 2005).

A general definition proposed by Linstone and Turoff (1975) states:

Delphi may be characterized as a method for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem (p 3).

Although the Delphi methodology has been used predominantly for forecasting and futures research, the technique has been applied successfully to analysis of policy options, building consensus for planning, developing causal relationships in economic and political arenas, and developing structures for new models in response to problems (Linstone & Turoff, 1975). A Delphi study, regardless of the specific goals and methods of the individual study, is conducted through a process of questionnaire administration that is iterative. Each round builds upon the anonymous responses of the expert panelists. The process can be conducted in numerous rounds, or as few as two. Critical to the process is anonymity and the provision of feedback to the respondents. Responses for each round of questions are analyzed and fed back to the expert panelists for revision, clarification, extension, or rating. This iterative communication process across a team of
experts produces a shared or common understanding of varied aspects of the problem and elicits original alternative solutions (Linstone & Turoff, 1975).

Experts with specific knowledge of the issues surrounding the problem seen through different experiential lenses will provide alternative views. The structure of this Delphi study will allow for a "team" of experts from parallel, yet different, domains within the broader discipline of education to communicate with one another independently and anonymously, to create common understandings of the problem so they might propose and evaluate informed alternatives for future action.

Limitations of the Study

Although rigorous criteria were established to evaluate the expertise of invited panelists, expertise is a subjective and relative term. There is a possibility that the sample does not reflect the broader population of those considered experts in their fields, and the results are limited by the backgrounds, biases and experiences of the participating expert panelists. Generalizability of the findings from this qualitative study is limited by this concern (Patton, 2002).

Not all experts who were invited to participate responded. The voluntary nature of the responses suggests a preexisting concern for the problem. Those experts who were invited but chose not to respond may have contributed a different perspective that would have been valuable to the study.

The study is limited by its reliance on time and context for validity, as are many qualitative studies (Patton, 2002). The changes in political, social, educational or economic factors over time threaten the validity of the study. The findings must be considered within the context of these factors at the time of data collection.
The findings of this study are limited by the interpretation of the qualitative data. Alternative interpretations of responses are possible, and researcher bias may have influenced the interpretation and subsequent design of the round two questions. The researcher has a professional interest in gifted education, having been a gifted education teacher at one point in her career.

The study was limited by the small and disproportionate sample size, as well as the attrition of participants, raising validity concerns. The time demands placed on participants by the iterative rounds of survey responses increased the likelihood of attrition. The sample size was appropriate for a Delphi study, and attrition was minimal.

**Delimitations for the Study**

The decision to include experts from gifted education, professional development and school administration was made in an attempt to include experts who have practical and empirical understandings of the problem within the context of education. Although policymakers play a significant role in the delivery of gifted education services and could have contributed insights into the research questions, they were not considered for the panel, in an attempt to maintain focus on the professional learning aspect of the problem rather than the policy nature of the problem.

Empirical evidence suggests that experts within their disciplines or domains are more adept than novices at recognizing and solving problems, but may not be more skilled at predicting future issues or outcomes (Chi, 2006). The focus of this study was on generating and analyzing alternatives for future actions, and not on precise forecasting of events.
No attempt was made to include factors that influence secondary school or higher-
education administrators in the research questions. This decision was made to maintain a
narrow focus in order to foster the generation of rich qualitative data.

Definitions of Terms

Differentiation. Differentiation is the practice of adapting the content, process
and products of curriculum and instruction to meet the needs of learners based on their
readiness, learning style and interests (Tomlinson, 1999; 2001).

Expert. The dictionary definition of expert will be used for the purposes of this
study. According to Webster’s New World Dictionary (1972), an expert is “A person
who is very skillful or highly trained and informed in some special field” (p 493). Adler
and Ziglio (1996) suggested that the definition of expert varies according to the field of
interest addressed in the Delphi study. Based on extant literature, for the purposes of this
study, the term expert was defined as “those individuals who have acquired experience,
special skill or knowledge in the educational domains of gifted education, professional
development or school administration” (Adler & Ziglio, 1996; von der Gracht, 2008).

Expertise. “Expertise refers to the characteristics, skills and knowledge that
distinguish experts from novices and less experienced people” (Ericsson, 2006, p. 3).

Gifted. There is no consensus for one definition of gifted, or giftedness. For
example, in the United States, 41 state education departments have established definitions
of giftedness, yet only 29 require local school districts to follow the definition. Many
specific areas of giftedness are identified in state definitions; including, intellectually
gifted (34), creatively gifted (26), performing and visual arts (25), academically gifted
(23), specific academic areas (21), leadership (17), culturally diverse (10), ESL and ELL
The focus of this study is on providing gifted education professional development for general education teachers, implying a focus on intellectually and academically gifted students. However, an inclusive definition will be applied, as adopted by the federal government, to insure that all aspects of the problem are at least left open to discussion.

The current federal definition, as written in the Elementary and Secondary Education Act, was adopted for this study:

Students, children, or youth who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services and activities not ordinarily provided by the school in order to fully develop those capabilities (No Child Left Behind Act, P.L. 107-110 (Title IX, Part A, Definitions (22) (2002); 20 U.S.C. Sec. 7802 (22) (2004)).

For the purposes of this study, the terms gifted student, gifted learner, and advanced learner will be used interchangeably as they are in the extant literature.

Professional learning. For the purposes of this study, the terms professional learning and professional development were used interchangeably. Professional development, as defined by the National Staff Development Council, refers to the implementation of a "comprehensive, sustained and intensive approach to improving teachers' and principals' effectiveness in raising student achievement" (NSDC, 2009).

Values and attitudes. For the purpose of this study, values will be discussed from a sociological perspective, and defined as "the ideals and customs that have been embraced by the cultural group". Attitudes are held by individuals and represent the
dispositions or feelings people possess towards a practice or person; in this study, gifted students and gifted programming.

**Organization of the Study**

The study is organized into five chapters. This chapter provides an introduction to the design, purpose and significance of the study. In Chapter II, the research, theory and literature relevant to the study will be reviewed, including the many factors that influence gifted education in elementary and middle schools. The chapter includes a synthesis of the research, theory and literature related to the study. In Chapter III, the design and methodologies used in the study will be described, including the rationale for applying Delphi methodology to the study and the procedures for sampling, instrumentation, and data collection and analysis. Threats to internal and external validity of the study are identified and discussed. Chapter IV includes the results of the study, the data and analysis. Tables and figures are included where appropriate for clarity of understanding. Chapter V includes a discussion of the key findings of the study, and presents conclusions and recommendations for policy, practice and future study.
CHAPTER 11

REVIEW OF THE RELEVANT RESEARCH, THEORY, AND LITERATURE

Introduction

The literature reviewed was related to the factors surrounding the professional learning of general education teachers in the area of gifted education and the role of school administrators in that process. Research regarding the delivery of appropriate curriculum and instruction for gifted students, and the factors that influence the current availability of appropriate education for gifted students, provides a foundational understanding of the need for further research and action in this area. Included in the literature review are research studies pertaining to professional development for general education teachers in topics related to gifted education and the factors that influence school administrators in their role as instructional leaders relative to gifted education. The literature on experts and expertise will inform the reader’s understanding of the study’s methods and purpose.

Focus of the Review and Inclusion/Exclusion Criteria

The intent in this review is to examine the research related to the complexities associated with the delivery of appropriate educational opportunities to gifted students and the role of school administrators in building capacity in teachers to deliver these opportunities effectively. This review is organized around broad lines of inquiry related to the political, educational, social and economic factors that influence gifted education in school settings. The review includes studies investigating the factors that surround the problem, including the status of curriculum and instruction for gifted learners in general education classes, the influence of policy and funding on gifted education, professional
development of general education teachers in topics related to gifted education, school administrators' leadership related to gifted education, the role of values in decisions related to gifted education, conceptions of giftedness, and studies that use expert opinion to investigate topics related to gifted education.

Studies included in this review are delimited to government/research lab reports, research monographs, and primary empirical studies including survey, causal-comparative, experimental, quasi-experimental, and case study research published in peer-reviewed journals. Studies conducted in K-8 school settings were the focus for the review. Most advocacy literature was excluded with the exception of one advocacy group report (CSDPG-NAGC, 2009) that was included to review the most current level of state and local funding of gifted programming with accuracy.

**Literature Search Procedures**

A search of the research, theory, and literature was conducted using databases including ProQuest Education Journals, EBSCO, PsychInfo, ERIC, JSTOR, Academic Search Premier, and Dissertation Abstracts. The Google search engine was used to access additional research. Key terms used in the search were conceptions of giftedness, Delphi study, differentiation, funding, expert, expertise, gifted education, professional development, professional development and gifted, school administrators, and gifted.

**Effect Sizes**

Where effect sizes are reported in the literature review, Cohen's (1988) benchmarks (as cited in Valentine & Cooper, 2010) were used as the standard in interpreting the significance of the findings. Cohen identified an effect size as small if $d=.20$ or $r=.10$, medium if $d = .50$ or $r = .30$, and large if effect sizes were $d = .80$ or $r = .50$. Effect sizes
in educational research tend toward being small, so might not accurately reflect the importance of the findings.

**Delimitations for the Review**

Literature related to differentiation for varied populations of students such as special education students and English language learners is available, but for the purposes of this study, studies that examined differentiation for gifted students only were included.

Research studies that focus on student achievement resulting from professional development have been excluded in this review, since the research questions guiding this study are limited to the relationships between school administrators, professional development and teacher practice.

Literature reviewed was confined to studies that investigated gifted education in grades K-8, since the study is focused at those grade levels. It is possible that research focused on gifted education in preschools or secondary schools may have offered additional insights into the problem.

**Educational Factors that Influence Gifted Education**

**Gifted Students in the General Education Classroom**

Teachers bring to classroom practice their own values, beliefs and understandings about how students learn. Teaching academically diverse learners requires that teachers have the ability to assess student readiness accurately, knowledge of learning options that take into account student readiness level, and the ability to modify the content and amount of instruction for students when appropriate (Moon, Callahan & Tomlinson, 1999; Tomlinson, 2001). Qualitative and quantitative studies reviewed in this section
report surveys, observations, interviews and case studies, to investigate the frequency and quality of differentiation practices in general education classrooms.

Archambault et al. (1993) surveyed private (n=980) and public school (n=3993) third- and fourth-grade teachers from varied regions of the country, including schools with high minority populations (n=2341). Goals for the study were to identify the frequency and types of differentiation practices occurring in third- and fourth-grade classrooms nationally, and to compare the differentiation practices for gifted students with those made for average students. Archambault et al. (1993) reported that minimal modification of curriculum and instruction was occurring in the participating classrooms at the time of the study, and some moderate differences between differentiation practices aimed at gifted students compared with average students were found. Practices that were most frequently used by public school teachers for gifted and average students included discussion, higher-level questioning strategies, and the infusion of thinking skills in the regular curriculum. These practices were not employed with any more frequency for gifted students than for average students (ES ranged from 0.03-0.09). Practically significant differences in practices for gifted and average students were found in assignment of advanced-level reading (ES= 0.62), use of enrichment worksheets (ES= 0.41), and different work for students mastering material (ES=0.33). A large effect size (0.78) between practices for gifted and average students in reading and writing assignments was found in the private school sample. Teachers reported using curriculum modification such as pretesting, compacting and varied assignments moderately–only slightly more than a few times a month for both gifted and average students.

Archambault et al. (1993) reported that teachers offered little more differentiation
for gifted students compared with average students, but without consistent employment of criteria for identification of gifted students across the geographically and demographically diverse sample, it is unclear whether variance in the gifted students in the classrooms may have influenced teachers’ reported practices. Westberg and Daoust (2003) replicated the Archambault et al. study (1993) to identify what, if any, changes had occurred over the previous decade in differentiation practices for gifted and general education students. The Classroom Practices Teacher Survey was slightly revised in the demographic items, and completed by a random sample of third- and fourth-grade teachers (n=543) from two states. Rural, urban and suburban communities were represented in the sample. Although the replication study drew from a smaller geographic area and sample than the earlier study, the findings of the replication study confirmed the findings of the original (Archambault et al., 1993) study. No statistically significant differences were found among the differentiation practices for gifted and average students. The results of this study suggest that the problem has persisted over a decade, yet caution should be taken when interpreting these results as such, since sampling differences and the disparate identification practices of gifted students between samples, as well as the limitations of self-report data, may have influenced the outcome.

Self-reported data with regard to differentiation practices for gifted students may not reflect actual classroom practice. Gentry, Rizza and Owen (2002); and Moon, Callahan, Tomlinson and Miller (2002) conducted survey studies to determine if the differentiation practices that teachers reported had any relationship to the differentiation practices that students perceived were occurring. Gentry et al. (2002) surveyed a sample of culturally diverse students in grades 3-8 from 23 school districts in seven states. The
sample included participants from three different classroom configurations: gifted students in regular classrooms (n = 285), elementary gifted students in magnet schools (n = 893), and other students in regular classrooms (n = 2468). Teachers (n = 155) were surveyed to measure their perceptions of the frequency at which they provided differentiated activities through challenge and choice.

Gentry et al. (2002) found no statistically significant relationship between teachers' reported practice and what students perceived occurred in classrooms, with regard to challenge in the elementary (r[90] = .062, p = .564) or middle school (r[63] = .044, p = .724) classrooms. They found a small, but statistically significant, positive relationship between the student perceptions of choice and what teachers reported in the elementary classrooms (r[90] = .276, p = .001). No statistically significant relationship on the dimension of choice in the middle school (r[63] = .148, p = .248) was found. Students in gifted magnet schools perceived more challenge compared to other groups. This finding may have been influenced by differences in pedagogical skill or knowledge related to gifted education between gifted magnet school teachers and other teachers in the study. The findings in this study suggest that the differentiation practices which teachers report may not be experienced or perceived by students as adequately challenging or providing sufficient choice. It is unclear what methods were used to identify the students in the sample as gifted, leaving questions regarding the influences that variations in conception and degree of giftedness may have had on student or teacher perceptions of the need for differentiated learning experiences.

Moon et al. (2002) reported similar findings in the relationship between teachers' reported practices and student perceptions. Surveys were distributed to teachers (n = 211)
and students (n=2038) in grades 6-8 from nine schools in three states. Although the intent of the study was to follow a cohort of teachers for three years, only the initial survey of practices were reported, due to the attrition of the teacher sample. Moon et al. (2002) reported that the frequency of differentiation practices reported by teachers differed from student perceptions. The majority of teachers reported using varied instructional material less than twice a year for advanced learners, and a majority of students reported never using different materials. Additionally, a majority of teachers reported offering choices to students twice a year or less, yet students reported that they were never offered choice. This finding is consistent with the Gentry et al. (2002) findings. In the area of curriculum modification, teachers reported adjusting for depth of content weekly and most students indicated that they never receive different assignments. Students and teachers agreed that whole class lecture and cooperative groups were used frequently, and learning centers, flexible or interest grouping, and mentors are never used.

In the Gentry et al. (2002) and Moon et al. (2002) studies, the researchers used parallel, yet different, survey items in the teacher and student questionnaires. The design of these studies relied on the similarity of items to suggest relationships, but the interpretation of the items by respondents may have influenced the findings. In both studies, the samples were taken from school districts that were designated partner schools with the National Research Center on the Gifted and Talented (NRC/GT). It is possible that these districts have an increased interest in gifted education not found in the general population. Additionally, it is unclear what identification procedures were used in either of these studies to insure the gifted student samples were similar between groups in
academic or affective needs, limiting the generalizability of the findings in either study.

The findings of observational studies support the conclusions of Moon et al. (2002) and Gentry et al. (2002). Westberg et al. (1993) conducted an observational study of instructional and curricular practices used with gifted students in third- and fourth-grade general education classrooms from across all regions of the United States. One gifted and one average ability student in each classroom (n=92) were observed over two days to assess the frequency of differentiated activities and materials experienced by gifted and average ability students, followed each day by semi-structured interviews with the teachers. Findings indicated that, across five subjects, gifted students were provided instructional or curricular differentiation in only 16% of activities observed; students spent, on average, 21% of their time in homogeneous ability groups; and observers noted that, on average, student involvement with advanced content (5%) and advanced processes (3%) was limited. More differentiated activities were observed in suburban (21%) than in rural (12.1%) and urban (9.6%) school districts. To insure comparative samples between schools, the researchers in this study collected achievement data on all observed students to ensure that gifted student groups from the various school districts were identified by similar criteria.

Research examining frequency and type of differentiation practices tells only part of the story. Differentiation practices that support the learning of gifted students, such as homogeneous grouping by ability, are effective only if there is some difference in curriculum and instruction within the groups. Reis, Gubbins, Briggs, Schreiber, Richard, Jacobs, Eckert, Renzulli, and Alexander (2003) conducted a comparative cross-case study using observations and interviews to examine the types, level and frequency of
differentiated experiences for talented readers in third- and seventh-grade classrooms. The sample included 12 classroom teachers in 11 urban and suburban schools. Observations of reading instruction were conducted over 135 days, followed by semistructured interviews. Talented readers in three of the observed classrooms received challenging experiences some of the time, and the readers in the other nine classrooms received minimal differentiated experiences in reading instruction. When teachers grouped readers into “high” and “low” reading groups by ability, differentiation of curriculum and instruction in these groups was not evident. The methodology of the study included rigorous criteria for inclusion of talented readers in the sample, and the researchers attempted to include varied reading programs insuring that valid comparisons could be made across case studies. It is difficult, however, to assess the influence of other school factors, such as class size, teacher capacity or the influence of observer effects on participants. This study illustrated the complexity of differentiation and the multilayered dimensions of practice.

The findings from these diverse studies, when considered together, paint a picture of limited differentiation occurring for gifted students across socioeconomic status (SES), community profile and school district organization factors in the decade between 1993 and 2003. A notable design and validity concern in gifted education research is the lack of commonly accepted identification criteria for student giftedness that might ensure comparability between samples and studies. Additional research is needed to determine how much and what types of differentiation effectively develop gifted students’ academic potential.
Focus of Differentiation Efforts

Recent studies suggest that gifted students spend a majority of instructional time in heterogeneous classrooms, and general education teachers often focus differentiation efforts on struggling students, in response to increased pressure to raise standardized test scores. Maguire (2008) investigated the differentiation and acceleration practices for gifted students in school districts across Pennsylvania. Maguire found that 73% of educators responsible for gifted education programs in the state (n=139) indicated that gifted students spent 75-100% of their instructional time in heterogeneously grouped classrooms, and few district-wide structures were in place to support teachers in the complex task of differentiating instruction for either struggling or gifted students.

With the pervasive practice of heterogeneous classes, teachers make choices about the allocation of time and attention for students with varying needs. In a small survey study of teachers and administrators (n=10), Mendoza (2006) found that, when estimating instructional attention and time spent on different students, teachers estimated that students who were partially proficient on the standardized tests received 39% of their instructional attention, followed by proficient students (26%), partially proficient students (24%), and gifted students (11%). Teachers self-reported that most differentiation occurred for the lowest students, and expressed concern that gifted students were often asked to work independently in lieu of planned differentiated experiences. A national survey conducted by Moon et al., (1995) of principals (n=500) and teachers (n=449) found a lack of instructional focus on gifted students in the participating middle schools. Sixty-four percent of principals surveyed indicated that heterogeneous classes were the norm in their middle schools, and only 18% of the principals reported that heterogeneous
classes with differentiated curriculum based on readiness was common practice in their schools. Nearly half (41%) of the teachers dedicated less than 25% of instructional time on differentiated lessons for gifted students and reported never using, or using only a few times a year, strategies to address diverse student needs including preassessment (52%), compacting (69%), tiered assignments (49%), flexible pacing (41%). It is possible that the incidence of implementation of these strategies may have actually been higher or lower. Although the sample of principals was random, teachers were recruited to participate by principals, so selection bias may have influenced the findings.

Moon, Callahan, Tomlinson and Miller (2002) modified the Moon et al. (1995) survey, and administered it to a sample of middle school teachers (n=76) from nine school districts representing three states. A majority of respondents indicated that whole class lecture was the modality of instruction most often used in their classroom. Student survey data confirmed these findings and found that students perceived a reliance on textbooks and a focus on standardized test preparation. Moon et al. (2002) noted an apparent change in instructional planning that was not evident in 1995. Teachers indicated that state standards and local curriculum guides were most influential in controlling their instructional decisions in 2002, a finding not apparent in 1995.

The studies in this section represent over a decade of research, and show a persistent lack of instructional focus on gifted students. Survey studies dominate the research on instructional focus related to gifted education, and there is a possibility that perceptions of teachers do not accurately reflect classroom practice.

Capacity of General Education Teachers

Teacher capacity, as defined for the purposes of this study, is "the actual ability of
teachers to perform effectively. To develop capacity, teachers must develop a critical understanding of the new initiative or strategy and the procedural knowledge to implement effectively. These competencies and understandings come through skilled practice, feedback to restructure knowledge, more skilled practice, and the subsequent movement through several iterations of this pattern (Leithwood & Jantzi, 2006). This level of capacity development requires a commitment to the process and may be difficult to attain.

Rigor of the curriculum, class size and composition, external policy pressures, values, motivation, awareness of need, and professional development opportunities may influence teacher capacity to differentiate effectively for gifted students in heterogeneous classes. Research examining teachers’ pedagogical capacity to differentiate has primarily focused on measuring the frequency and/or evaluating the types of differentiated experiences teachers provide through self-reported survey data, interviews or observations. (Archambault et al., 1993; Gentry et al., 2002; Moon et al., 2002; Reis et al., 2003; Westberg et al., 1993).

Capacity to differentiate may be in the eyes of the beholder. A handful of studies have shown that teachers, administrators and students may differ in their perceptions of teachers’ capacity to differentiate curriculum and instruction for gifted students. Moon et al. (1995) found that middle school principals (n=500) and teachers (n=449) differed in perceptions of teacher capacity and practice. Teachers believed that they had the ability to effectively differentiate for gifted students, yet administrators did not share the same level of confidence in teachers’ abilities. Principals and teachers differed most significantly in their perceptions of how well teachers were prepared to deal with special
populations in the regular classroom. For all student groups; special education (T=71%, P=44%), remedial/at risk (T=83%, P=59%), and gifted/advanced learners (T=79%, P=57%), a larger percentage of teachers than principals indicated that they were adequately, or very well, prepared for meeting these needs in the regular classroom.

Fifty-two percent of the principals were confident that teachers had the pedagogical knowledge and skill to design multiple learning activities based on student readiness, compared to 79% of the teachers who felt they had the knowledge and skill to plan appropriate lessons based on readiness. The disparate perceptions between teachers and principals in this study might be related to teacher overestimation of their capacity to differentiate, or principal underestimation.

Teachers’ perceptions of their own differentiation practices may differ from students’ perceptions. In a study of middle school teachers from three states (n=76), Moon et al. (2002) found that a majority of teachers (58%) identified their own training and experience in differentiation as a factor that helped their differentiation efforts. However, in this study, researchers also reported that students perceived far fewer experiences with modification of curriculum and instruction than teachers reported. The disparate findings might indicate a lack of teacher acknowledgement, awareness, or adequate understanding of the frequency and types of differentiation appropriate for gifted students. Maguire (2008), likewise, found that more than half of the gifted educators (n=139) surveyed responded that teachers and administrators were knowledgeable about the nature and needs of gifted students, yet 70% indicated that no professional development in the nature and instructional needs of gifted students had been provided to teachers or administrators in the two years prior to the study. Teachers
may believe that they adequately understand differentiation and implement differentiation practices effectively, but student and administrator perceptions cast doubt.

These results showed that teachers might not have a realistic view of their own capacity to differentiate for gifted students. Without an accurate understanding of their capacity to meet the needs of gifted students effectively, teachers may not be able to judge their own professional learning needs accurately. Few studies designed to explore the possible factors that influence the development of teacher capacity related to gifted education have been published. Additional research is needed to investigate the relationship of educational, social, economic and political factors to the development of the pedagogical knowledge and skills necessary for general education teachers to be effective with gifted students.

**Preservice Experiences**

Assumptions that teachers receive adequate training in the characteristics and unique needs of special student populations during their undergraduate teacher preparation programs are not supported empirically. Novice teachers frequently enter classrooms with limited preservice knowledge and experience in addressing the needs of gifted students. Many preservice teachers are not exposed to the principles and practices of gifted education in university teacher preparation programs. Chamberlin and Moore (2006) investigated the exclusion of gifted education topics in undergraduate education programs. They found a direct relationship between university instructors' (n=68) self-reported knowledge of gifted education and the amount of instructional time spent in their methods class on gifted education ($F=5.69, p=.002$). These findings may suggest a self-perpetuating phenomenon. A significant relationship between the instructional time
devoted to gifted education and the institutional requirement for coursework was also reported. In institutions where only one course partially addressing gifted education was required, 58% of the instructors indicated that they spent only one to two hours on gifted topics. The weight of this finding can be appreciated when considered with data collected from a survey (Blackman, 1958) that was conducted over 50 years ago. In 1958, college courses on the subject of exceptional learners dedicated an average of 10% of the course time to topics related to gifted education. In 50 years, little has changed, illustrating the persistence of the problem. Further research is needed to uncover the extent of the problem and underlying reasons for its persistence in undergraduate education.

Limited research has been conducted to determine the extent to which preservice attention to gifted education topics might influence novice teachers' instructional practice and attitudes towards gifted students. In a three-year quasi-experimental study, Tomlinson, Callahan, Moon, Tomchin, Landrum, Imbeau, Hunsaker, and Eiss (1995) examined the development of preservice teachers' attitudes and instructional practices related to gifted students. In Phase 1 of the study, preservice teachers (n=41) received no training, other than that provided in their teacher preparation coursework. In Phase 2, preservice teachers were randomly assigned to one of two treatment groups. One group (n=22) received a workshop on differentiation only, and the other group (n=23) received the workshop and coaching. Phase 3 followed a small sample of teachers from Phase 1 (n=6) and Phase 2 (n=2), through their student teaching experiences. Surveys, interviews, observations and documents were used to collect data.

Survey data indicated that, although preservice teachers from all groups held
similar attitudes toward advanced learners and differentiation before treatment, the attitudes of all groups toward differentiation slightly decreased following treatment and only the workshop and coaching group showed mean increases in attitude toward advanced learners. The researchers who conducted the study noted that the decrease in reported attitudes towards differentiation might represent participants' realization of the complex and difficult nature of differentiation. Qualitative data gathered from observations and interviews suggested that preservice teachers in all groups recognized that they had a responsibility to meet diverse student needs, used ambiguous criteria to identify those needs, and possessed limited strategies on which to draw to provide effective instructional practices. The workshop only, and workshop and coaching groups, maintained and articulated a belief in the need to differentiate that the control group did not. The quality of the workshop experiences, coaching, and teacher preparation program could have impacted the results of this study. Participant selection from a limited sample of teacher preparation programs in this study might not have been representative of the experiences of most preservice teachers.

The findings in this section suggest a persistent lack of preservice experience with gifted education topics in teacher preparation programs. The value of preservice experiences with gifted topics may simply be the recognition of need for differentiation of curriculum and instruction for gifted students. The scarcity of research on this topic may be indicative of the difficulty in investigating the influence of preservice learning on teacher practice in subsequent years that is posed by a lack of consistent preservice requirements in gifted education and variations in the experiences of novice teachers once employed in school districts.
In-Service Professional Development

With few preservice experiences in gifted education topics available to teachers, one might expect that teachers would have access to these experiences at some point in their careers. However, findings of several studies suggest that opportunities for professional development in gifted education topics for general education teachers are limited. Archambault et al. (1993) found that 60.8% of public school teachers (n=3993) and 53.3% of private school teachers (n=980) self-reported that they had never received training in gifted education. Mendoza (2006) found that teachers indicated that professional development opportunities were occasional, and sometimes were available only to gifted specialists, and not to general education teachers. These findings are consistent with findings of the Reis et al. (2003) reading study, in which a majority of teachers who were not differentiating for the talented readers reported that they had received no prior formal training and minimal professional development opportunities in differentiating for talented readers.

Gubbins et al. (2002) conducted a national five-year quantitative and qualitative study to investigate professional development practices in gifted education. In Phase One, the researchers employed a survey to examine professional development practices related to gifted education. A stratified random sample (n=1231) of school districts from different regions of the country, and a smaller sample of the partner districts of NRC/GT (n=293), participated in the survey phase of the study. Most of the respondents to this survey were administrators (46.5%) or gifted program coordinators (26.8%). The respondents reported that the primary decision-makers for professional development in gifted and talented topics were school administrators (29.7%), gifted program
coordinators (21%), or district-wide committees (14.3%).

Based on a four-point response set, inaccurate (1) to completely accurate (4), respondents reported that classroom teachers were encouraged to identify individual professional development goals related to gifted education (M=2.50, SD= 0.94). The administrators further indicated that professional development had positively impacted teachers’ knowledge base in gifted education in their school (M=2.93), teacher instructional skills and abilities (M=2.78), teachers’ curriculum development practices (M=2.74), and their ability to differentiate curriculum and instruction (M=2.75). These findings suggest a positive change in teacher practice; however, administrators also reported that little evaluation of the influence of professional development on teachers and students (M=1.71, SD=0.96) occurred. This inconsistency suggests that the perception of goal attainment and improvement of teacher practices by respondents is not based on any supervisory or observational data collected by administrators or researchers, and may represent desired outcomes rather than actual outcomes.

The quantity of professional development opportunities available to teachers appears from the research to be limited, but the quality of these experiences are equally important to inform professional development decisions. When teachers participate in professional development experiences in gifted education, they are often delivered through in-service workshops, outside workshops, or college courses. Gubbins et al. (2002) found that professional development experiences focused on gifted education topics were predominantly delivered as informal conversations (M=3.04), print information (M=2.89), conferences (M=2.89) and workshops (M=2.57). Collaborative learning opportunities were less prevalent among the respondents. These findings are
similar to those of Archambault et al. (1993), who reported that teachers’ training in gifted education was acquired by in-service opportunities (40%), outside workshops (20%), and college courses (30%). These findings suggest negligible commitment to ongoing job-embedded professional development experiences for in-service general education teachers in gifted education topics in most schools. More research is needed to investigate the quality of professional development experiences available to general education teachers in gifted education topics and the factors that influence decisions related to the provision of professional development in gifted education to general education teachers.

**Professional Development Effectiveness**

Individuals are motivated to learn, or change, when they believe the present state is inferior to the desired state and they see goals as valuable and achievable (Leithwood & Jantzi, 2006). Professional development in gifted education topics may serve to raise teachers’ awareness of their actual capacity to differentiate effectively for gifted students and/or increase their motivation to provide differentiated experiences. Much of the literature related to professional development in gifted education is practice-centered and focused on investigating the influence of specific professional development interventions on teachers’ attitudes and practices related to gifted education.

Hansen and Feldhusen (1994) compared the instructional skills of 54 trained teachers who were enrolled in graduate programs working toward a 15-credit gifted education endorsement in Indiana with the skills of 28 untrained teachers. Observations, a teacher questionnaire, and student (n=365) survey were used to collect data. Students rated trained teachers significantly higher than the untrained teachers ($E^2=.66$). The
observation scales and participant questionnaire data were correlated and showed a practically significant relationship between training and instructional skill ($r=0.64$, $p<.001$). The results indicated that trained teachers used concept-based approaches that allowed students to study topics in-depth, used more appropriate pacing, offered more diverse learning experiences, asked higher-level questions, and chose materials with gifted students in mind more often than untrained teachers. In contrast, untrained teachers gave more attention to struggling students, and used more whole-class instruction with limited curricular focus than did trained teachers. The trained sample was selected from teachers who participated in a graduate program leading to an endorsement in gifted education, so were relatively highly trained. Results from this study suggest that participation in graduate-level coursework of 15 credits or more has a positive influence on teacher practice in gifted education, yet most teachers will not have this level of training in gifted education. It is not possible to know if the teachers in the untrained group who volunteered for this study were more or less committed or knowledgeable in gifted education than were those who did not volunteer. Finally, these findings should be interpreted with caution, since the identification of gifted students was not consistent across schools.

In the second phase of the Gubbins et al.'s (2002) five-year national study, the researchers developed professional development modules designed to develop gifted pedagogy skills in teachers. Quantitative and qualitative data were collected through self-report questionnaires, logs, portfolios, observations, student data and interviews to determine to what extent gifted pedagogy developed through interaction with the training modules improved teacher differentiation practices. Teachers participated in one of two
professional development treatments. In Treatment 1, the researchers used local trainers to implement a professional development module developed by NRC/GT researchers; and in Treatment 2, the NRC/GT trainers delivered professional development to local trainers, who then delivered the modules with follow-up coaching to interested teachers. The researchers found a statistically significant difference ($t(165) = -7.54, p < .001$) in treatment teachers' pretest and posttest scores on their self-reported differentiation practices, with similar findings for the comparison group. Treatment 1 teachers offered students more experiences in curriculum modification, enrichment centers and reading and writing assignments, than either Treatment 2 or comparison teachers.

The quantitative data from this study did not suggest a definitive link between professional development and changes in teacher practice, but the qualitative findings may. Qualitative findings indicated that treatment teachers changed enrichment, modification, and differentiation practices in ways the comparison group did not. Additionally, teachers maintained their commitment to using the strategies developed during the study, and found it easier to implement the new strategies with administrative support. The researchers relied on the teacher/trainers to provide much of the data for the study. All treatment teachers were exposed to a minimum of three to four hours of professional development, but some teacher/trainers reported offering 16 hours or more in coaching experiences over the two-year intervention period, raising validity concerns. The variances in trainer skill and knowledge, motivation, interpersonal skills, administrative support and values may have influenced teacher practice in more substantial ways than did the content of the modules or structure of the professional development treatment.
In another national study, Reis, Westberg, Kulkowich, Caillard, Hebert, Plucker, Purcell, Rogers and Smist (1993) conducted a quasi-experimental study investigating the influence of professional development on teacher practices in curriculum compacting for gifted students. Teachers (n=436) from 27 partner districts with the National Research Center on the Gifted and Talented (NRC/GT), were assigned to one of three treatment groups or a comparison group. Treatment Group 1 received one hour of videotaped staff development, and a book explaining curriculum compacting and related articles and examples. Treatment Group 2 received the same as Treatment Group 1, with additional simulations and practice provided by the local gifted and talented consultant. Treatment Group 3 received the same professional development materials and opportunities as Treatment Group 2, with additional peer coaching. Teachers completed a classroom practice questionnaire and compacting forms for one gifted student. Statistically significant differences (F=6.54, p<.01) were found between Treatment Group 3 and the other groups in the percentage of curriculum material compacted. Assessment and analysis of the quality of the compacting forms show that, although the mean assessment score was higher for each successive treatment group, the differences in ratings between groups were not statistically significant (F (2,427) = 2.06, p < .13). All treatment groups used enrichment strategies, and although Treatment Group 3 utilized more enrichment strategies than the other groups, fewer teachers in Treatment Group 3 (7%) utilized acceleration options than did teachers in Treatment Group 1 (22%) or Treatment Group 2 (20%). No difference between groups on indicators of desire to continue compacting practices in the future was found.

It is difficult to interpret the influence of the professional development
intervention in this study, since teachers selected the participating students and it is possible that variance in student ability, need, interest and motivation may have influenced teachers' decisions regarding enrichment and acceleration practices. Although the partner districts that participate in NRC/GT research studies have no prior relationship with the researchers, an individual or group has solicited the partnership status with the center. This may or may not suggest the partner schools have more interest in gifted education than a true random sample might.

In a few studies, researchers have explored the change in teachers' attitudes and instructional practice relative to gifted students, following the implementation of curriculum based in gifted education pedagogy. In a small case study, Hertzog (2007) investigated changes in two first-grade teachers' practices as they implemented a project-based learning curriculum over three months. Teachers participated in a weeklong workshop, followed by coaching provided by the researcher. Field notes, instructional documents, student portfolios and interview transcripts were used to collect data. Hertzog found that teachers became more comfortable with project-based curriculum during the course of the study and were able to find the balance between basic skills instruction and facilitation of inquiry-centered activities. Both teachers expressed uncertainty with students' gains or understandings, and were concerned that time on project-based units would render them unable to cover state- and district-mandated topics. A three-month period may not offer enough time to see the longstanding influences of professional development interventions on teacher practice.

Long-term professional development to support the implementation of curriculum based in gifted pedagogy might improve teacher ability to deliver differentiated teaching
strategies. In a three-year quasi-experimental study, Van Tassel-Baska et al. (2008) investigated the changes in the instructional behaviors of heterogeneous classroom teachers who implemented a curriculum based on the Integrated Curriculum Model and participated in professional development to support the implementation. Third-, fourth- and fifth-grade teachers from six school districts were randomly assigned to either an experimental group (n=37) or a comparison (n=34) group. Data were collected through six observations over three years. Teachers in the experimental group received higher ratings than did comparison teachers on the observation scales, with significantly stronger instructional behaviors than did the comparison teachers (F (1,64)= 12.4, p <.01). The gap between the instructional strategies of experimental and comparison teachers continued to widen over the three years, suggesting that ongoing professional development influenced instructional behavior of teachers.

Differentiation is a complex teaching process and requires transformational changes in teachers’ philosophy of education, as well as practice. Differentiation of professional development experiences based on teacher capacity and need might positively impact teachers’ pedagogical understandings and skills related to gifted education. Johnsen et al. (2002) investigated a two-year teacher training implementation in differentiating curricula for gifted students in the general classroom. A total sample of 74 teachers across six urban and rural school sites participated in the study over two years. Qualitative data were gathered through field notes, observations, interviews, multiple on-site visits, and final survey evaluation. Quantitative data were collected through systemic observations and ratings using a validated differentiated practices rating scale.
Professional development was delivered in a three-day workshop format in the spring of the first and second years of the study. Administrators and participating teachers attended the workshop that was followed by a 10-day summer training experience for cohort and mentor teachers. Teachers were able to choose learning activities from units that were most beneficial for them. Data analysis revealed that 73 of the 74 teachers made 249 changes to curriculum and instruction. The teachers moved a total of 641 steps on the differentiation rating scales, as measured by observations, interviews and field notes. Most notable is that 48% of the teachers began using assessment to accelerate or enrich the curriculum, and by the end of year two, 57% of the participants were using assessment to compact, enrich and accelerate. By the end of year two, 77% of the teachers were offering varied activity choices to students. Almost all (99%) of the teachers made conservational changes, or changes that supported what they were already doing, but many (89%) made transformational changes. The researchers identified factors that influenced the transformational change as freedom in goal setting, dedicated time, mentors, leadership and collegial support. The observations over time and the qualitative data collected in this study offer convincing evidence that providing choice for teachers in professional development experiences may foster change in practice.

The professional development effectiveness literature reviewed suggests that professional development might influence teachers' differentiation practices. The studies include qualitative and quantitative works that drew samples from broad geographic areas and demographics. The difficulty of evaluating the effectiveness of professional development on teachers' differentiation practices for gifted students is related to factors...
in both teacher and student sample selection. When studies rely on samples of teachers who pursue graduate education in gifted education or districts who seek out partnerships with research centers, it might be difficult to generalize the findings to districts and teachers that are more typical in their motivation to pursue professional development in gifted education. Furthermore, the lack of consistent identification of gifted students used in professional development research raises concerns about the comparability of samples. There is not yet a substantial body of literature to guide administrators or professional developers in making decisions concerning the types and levels of professional development necessary to make the transformational changes in teachers’ practice necessary to meet the needs of gifted learners effectively.

School Administrators and Gifted Education

School administrators make leadership decisions concerning school structures, curricular focus, instructional practice and professional development that influence teachers’ differentiation efforts. Little research was found in which researchers investigated the impact of administrative support and supervision on teacher practices related specifically to gifted education. Many studies however, suggest that administrative support has a positive influence on teachers’ ability to implement new instructional practices to differentiate instruction for gifted students.

Building management or organizational decisions made by school administrators may influence teachers’ instructional practices. The findings of several studies suggest that teachers, with varying percentages from 40% (Moon et al., 1995), 57% (Moon et al., 2002) to 83% (Maguire, 2008), self-reported that a lack of collaborative planning time hindered their efforts to differentiate instruction. It is interesting to note that the
percentage of teachers expressing frustration with a lack of planning time has increased over the years between these studies.

Principals and teachers might hold differing perceptions and interpretations of the issues that influence teachers' classroom practices. Moon et al. (1995) found that principals (n=500) and teachers (n=449) differed in their explanations for the limited variety of learning options that are provided to gifted students by teachers. Principals identified issues associated with teacher capacity, while teachers identified factors that were out of their control. Principals pointed to teachers' lack of knowledge about how to differentiate instruction (63%) and fear of management of differentiated lessons (47%), but teachers indicated that there was no need to differentiate (50%) and lack of planning time (40%) as the most influential factors preventing them from differentiating. Half of the teachers stated that differentiation was not necessary, a disturbing and notable finding. The conflicting perceptions of teachers and principals related to the causes for the lack of varied learning options raise questions about the role that dueling perceptions might play in the education of gifted students. Administrators may have inaccurate views of classroom practices relative to differentiation, and/or teachers might have limited awareness of their own practice and the need for differentiated curriculum and instruction for gifted students.

Supervisory practices of administrators may help explain the conflicting perceptions of classroom practice and teacher capacity. Maguire (2008) surveyed and interviewed Pennsylvania educators (n=139) responsible for gifted programming, and found that 80% of the respondents reported that administrators did not include differentiation of instruction as a component of observations. Similarly, Moon et al.
(1995) found that few principals indicated that they consistently looked for differentiated lessons in observations to meet the needs of remedial (24%) or gifted/advanced students (18%). This lack of supervision suggests that teachers may not be held accountable at any level for the instructional practices they implement for gifted students.

Administrators alone do not shape teacher practice. Spillane, Hallett and Diamond (2003) conducted a study using data from interviews and observations of teachers (N=84) from eight Chicago schools to investigate the factors that influenced teachers' instructional practices. The researchers asked teachers to identify which types of influence or "capital" shaped their instructional decisions, including economic capital, cultural capital, social capital and human capital. A large majority of teachers (83.3%) indicated that principals shaped their instructional practices, and that other teachers shaped their practices (79.8%). Many teachers (70.2%) indicated that administrators' leadership style (cultural capital) influenced their view of them as leaders, and fewer teachers (21.4%) indicated that knowledge and expertise (human capital) played a role in attributing leadership to them. When teachers viewed other teachers as leaders, many indicated human capital (45.2%) and collaboration and trust (social capital, 50%). The findings also indicated that teachers did not often attribute leadership to specialists (curriculum coordinators, instructional supervisors, etc.) through human capital (7.1%) or social capital (3.6%). The findings suggest that the focus on school administrators as instructional leaders is only part of the story, when considering how and why teachers change their instructional practices.

School administrators are frequently called upon to make decisions and solve problems in the face of competing pressures. The problem-solving processes of
administrators may influence the decisions they make related to the delivery of gifted education. There is great variation in school administrators’ abilities and strategies for solving problems. Leithwood and Stager (1989) investigated the elements of administrators’ problem-solving processes and explored the differences between the problem-solving processes of expert and nonexpert principals. The elementary principals (N=22; 21 men, 1 woman) were presented with problem-solving tasks, and interview data was collected to determine the influences and strategies used to solve the problems. Six of the 22 principals were designated as experts by the researchers using specified criteria. Differences were found between the problem-solving strategies and influences of experts and nonexperts. Principals attempted to understand the least structured problems in three ways: they connected to past experience, collected new information, and made assumptions. Non-expert principals made assumptions rather than collecting information, specifically about obstacles to solving problems. Where nonexperts saw obstacles, experts saw matters to be considered in the problem solution. In the least structured (messy) problems, expert principals considered the consequences for the school as a whole and the academic growth of large numbers of students. Nonexperts expressed more concern about consequences to self than to others. Experts were able to interpret the problem clearly, and were more concerned with becoming informed and informing others relative to the problem. When considering staff in problem solutions, experts were concerned with assuring that staff understood the goal, and nonexperts were concerned with making them happy. Experts thought about the solution in detail and planned the process, while nonexperts did not pay attention to planning. The nonexperts in this study sample (75% of the sample) were experienced principals.
It is not possible to conclude that this sample is representative of the general population. Of the 23 participants, only one was a woman, which may not reflect the general population of school administrators, and may raise concerns that gender differences influenced the findings in this study. Based on the proportion of nonexperts to experts in this sample, one could speculate that a majority of principals are nonexperts. Based on this speculation, it is possible that most principals make decisions based on assumptions, see obstacles as insurmountable, and do not plan for solution implementation effectively. This could have implications for administrative decision-making related to gifted education.

The literature related to school administrators and gifted education is scarce and predominantly focused on the influence of administrators on teachers’ attitudes and practices. Most administrators do not supervise the implementation of differentiation for gifted students, so may not fully grasp the magnitude or significance of the issues surrounding gifted education in general classrooms. Without an accurate awareness of current practice, administrators may blindly make decisions based on assumptions, rather than on fact. Research is needed to explore the influences on school administrators when making management and supervisory decisions, and examine how consideration for gifted students in administrative decision-making might influence gifted education practices.

Synthesis of the Literature Related to Educational Factors

It is difficult to say with any certainty, based on the reviewed literature, that inadequate differentiation is occurring for gifted students in most classrooms across the United States in 2011. The lack of consensus on definitions and/or identification criteria
for giftedness has left researchers with questionable samples of gifted students, limiting their ability to compare findings across studies with confidence. The findings in the studies, when considered in totality however, suggest that limited differentiation for gifted students in general education classrooms has persisted for years. The literature includes studies drawing samples from all regions of the United States, suggesting a national problem.

The literature reviewed suggests that instructional efforts focused on struggling students dominate the time and attention of general education teachers in heterogeneous classrooms. Administrators make decisions and establish curricular and instructional focus that either support or hinder teachers' efforts to differentiate. Decisions that appear indirectly related to gifted education at first blush; such as, providing collaborative planning time, setting curricular and instructional priorities, and supervision practices; appear to trickle down to influence gifted education. The factors that influence administrators' decisions and practice relative to gifted education and the extent to which administrative practices impact teachers' practices is still relatively uncharted territory.

Limited preservice and in-service learning opportunities have been available to general education teachers on a consistent, or wide-scale, basis. The effectiveness of professional development on teachers' practice is rarely evaluated, making it difficult to assess the quality of professional development. Research to explain the paucity of professional development opportunities for general education teachers in gifted education topics is nonexistent in published literature.

Organizational learning is prompted by some perceived need or problem (Leithwood, Leonard, & Sharratt, 1998). The literature suggests that teachers may
believe that they differentiate instruction for gifted students more than either administrators or students perceive that they do. In light of these findings and the research suggesting limited availability of professional development in gifted topics to general education teachers, there is a possibility that administrators and/or teachers do not perceive the need for differentiated learning experiences for gifted students and/or professional development to develop the necessary skills and knowledge to differentiate instruction effectively. Absent from the literature are studies in which researchers investigate the factors that influence administrators’ decisions related to the delivery of professional development in gifted education topics.

Research designed to investigate the educational factors that influence gifted education is hampered by the lack of a commonly accepted definition of giftedness that is revealed in sampling concerns. It is difficult to generalize findings from studies in which researchers attempted to measure the influence of independent variables on teacher practice when “gifted” is interpreted differently across samples.

**Political Factors that Influence Gifted Education**

**The Influence of No Child Left Behind Legislation**

External factors can influence the focus and practices of school administrators and teachers. Several studies have been conducted in recent years to examine the influence of NCLB on teachers’ classroom practices. Results suggest that the legislation has had unintended consequences for educational practices related to gifted students. Valli and Buese (2007) examined the change in teacher practice over the four-year period from 2001 until 2005. This longitudinal study was conducted in a large school district (25 schools) in a state that established proficiency standards, state assessments, and a state
curriculum. In addition, the state increased pressure on school district personnel to expand inclusion practices for special needs students in the general education classroom.

The researchers interviewed principals, teachers, specialists, and staff developers (n=150) at intervals over four years, personally and in focus groups, and conducted observations to examine changes in teacher practice. Valli and Buese found that teachers reported taking on many additional tasks and changed their practice over the four years of the study. The control of curricular decisions that teachers once held diminished, as they were asked to align curriculum to state tests and implement curriculum on a district timetable. Teachers found increasing pressure to use pretesting and formative assessment to raise achievement of the lowest performing students, including ELL students.

The goals of differentiated instruction changed over the four years, moving from making certain all students experienced curriculum to meet their needs, to insuring that struggling students met proficiency requirements. Differentiation efforts became less teacher-directed as administrative control was increased and differentiation became more institutionalized. Teachers reported that the increased pressures from administrators to focus on differentiation improved their classroom practices, but also expressed concern that they were engaging in “drive-by teaching” due to the increased content and district-directed pacing. Teachers indicated that they had little time for infusion of thinking skills into curriculum and instruction. Observations showed that, although teachers collaborated to discuss assessment results, the discussions were directed toward grouping and regrouping efforts, and not on sharing of instructional strategies.

Observations revealed that teachers managed differentiation better, as the years progressed, through the use of differentiated worksheets and materials, yet the observers
noted an increased orientation toward basic skill instruction and saw no evidence of improved pedagogy in general. The longitudinal nature and outcomes of this study suggest that the increasing pressures to comply with NCLB have influenced teacher practice in this school district. The results of this study cannot be generalized, since many district factors may have influenced the findings. The study findings suggest a positive influence of NCLB on differentiation practices that included increased use of assessment to support flexible grouping practices and data-driven instructional decisions. However, the study also suggests an increased focus on basic skills, breadth rather than depth in curricular focus, and lockstep pacing of instruction over the four years of the study, which may have had negative consequences for gifted students.

The high stakes nature of the legislation’s accountability measures has increased the pressure that school administrators place on teachers to raise test scores. The findings of a national study conducted by Moon et al. (2007) suggest that high-stakes testing pressure influenced curricular and instructional decisions at administrative and classroom levels. In the first phase of the study—a survey of elementary (n=1289), middle school (n=415) and high school (n=393) teachers—was conducted to collect self-reported data about practices and beliefs of teachers. In Phase 2, focus groups and semistructured classroom observations in participating teachers’ classrooms were conducted to determine the influence that state tests had on curricular and instructional practice. Findings from the survey (responses ranged from 0-5) indicated that elementary (M=4.6, SD=.73), middle school (M=4.4, SD=.78), and high school (M=4.4, SD=.82) teachers self-reported feeling increased pressure over the three years preceding the study to change their instructional practices to raise student test scores, most frequently from
central office administrators (M=4.2, SD=0.96). Teachers reported that pressure originated from central office administrators, who placed pressure on principals, who in turn pressured teachers to focus on increased test scores. A majority of teachers (61%) responded that they taught to the test more than they otherwise would have, and 58.8% admitted to omitting in-depth topics of student interest due to lack of time. Teachers expressed frustration with administrative mandates to implement a heavily prescribed curriculum at a quick pace, with little flexibility for addressing student need. Many teachers reported receiving administrative directives to practice for the standardized tests in weeks prior to the test, at the exclusion of new material or engaging projects. Teachers reported that they perceived administrative pressure resulting in an increased focus on drill and practice for lower achieving students. However, Moon et al. (2007) reported that elementary teachers indicated, on a scale of 1-3 (rarely to often), that they gave attention to higher-order thinking skills (M=2.6, SD=0.56) and problem solving skills (M=2.8, SD=0.45) as often as they gave attention to basic skills (M=2.8, SD=.44) and factual knowledge (M=2.6, SD= 5.2). These seemingly disparate data are hard to interpret in relation to influence on gifted education, since no empirical research was found to indicate at what point the balance between basic skill development and higher order thinking skills became beneficial or detrimental to the achievement of gifted students.

In a small survey study investigating the influence of NCLB on gifted education, Mendoza (2006) found concerns with administrative pressure to change practice and focus on testing outcomes. Teachers (n=10) self-reported feeling pressure from district administrators to bring up the scores of low scoring students on state tests, and that more
of their time was devoted to test preparation than in previous years. Teachers reported a reduction in gifted students’ access to gifted programming due to test preparation activities. The literature related to the influence of NCLB on gifted education has focused primarily on how the legislation has influenced teacher practice, with few studies investigating the influence of NCLB on intermediary factors that may shape teacher practice, such as professional development.

Scot, Callahan, and Urquhart (2009) studied the influence of NCLB on a professional development initiative in a large urban school district. Over 500 teachers participated voluntarily in at least one of a series of online courses related to the education of gifted students. Data from online discussion boards, an end-of-course survey, and e-mail correspondence were collected and analyzed. Findings indicated that teachers who had completed the course(s) developed adequate knowledge of gifted student characteristics and understood the instructional practices appropriate for gifted students, yet felt unable to implement their new understanding effectively in the climate of NCLB. Many reported that what they had learned was relevant in an ideal world, but that they faced too many obstacles in the application of the knowledge that they had acquired during the professional development experiences. Although the teachers attributed their inability to implement their understandings to the pressures of NCLB in the Scot et al. (2009) study, Westberg et al. (1993) reported similar findings 15 years earlier. In this survey study, teachers self-reported that they possessed the appropriate knowledge and skills, yet felt unable to implement them effectively for gifted students in light of competing pressures. NCLB may not be the only factor inhibiting teachers’ ability to implement strategies learned through professional development experiences.
successfully, and illustrates the persistence of this aspect of the problem.

Although research results suggest that NCLB has precipitated changes in teacher practice, the implications of those changes on gifted students, either positive or negative, remain unclear. The literature raises the possibility that NCLB may have exacerbated, or revealed, existing problems that have persisted over many years, rather than caused them. The apparent increase in frequency of teachers’ differentiation practices, and use of assessment to drive instructional decisions since the legislations’ inception, may have positive influences on teacher practice for students. These changes do not necessarily translate into differentiation designed to meet the unique needs of gifted students. These studies suggest that teachers are feeling increased pressure from school administrators to adapt instructional practices and pacing to meet the needs of struggling students, perhaps at the expense of gifted students.

**Policy Implementation and Mandates**

The NCLB legislation has essentially created mandates for state and local district personnel that encourage administrative focus on struggling students by penalizing districts if the lowest performing students are not proficient on minimal competency standards. There are no such federal accountability measures aimed at improving achievement of gifted students, and state mandates and accountability measures are widely disparate.

The presence of state mandates for gifted programming may influence the levels of services for gifted students. Purcell (1994) conducted a survey study of personnel from 19 states, purposively sampled to include states with and without mandates for gifted programming with varying levels of economic health. Respondents (local
personnel, n=1579) were divided into four groups based on the economic and mandate status of the state; Group 1 - good economic health with mandated services, Group 2 - those in good economic health without a mandate, Group 3 - poor economic health with a mandate, and Group 4 - those in poor economic health without a mandate. Purcell found that 77% of the personnel in states with good economic health and mandated services (Group 1) reported gifted programs that were intact or growing. Personnel in states with good economic health, but no mandates (Group 2), and poor economic health with mandates, reported similar levels of intact or expanded programs (66% and 67% respectively). Local personnel from groups with intact or expanding programs in states with mandates, attributed program status to state mandates, and to a lesser degree, advocacy efforts (26%), regardless of the economic health of the state. In states with poor economic health and no mandates (Group 4), only 39% of the respondents reported intact or expanding programs. Nearly half (43%) of the respondents in Group 4 (no mandate, poor economic health) attributed the threatened status of programs to the lack of state mandates. Reform initiatives were not factors in the health of the programs in states with mandates. In states without mandates, local personnel (46%) attributed the status of intact or growing programs to advocacy efforts. Respondents in the groups with gifted programs that were threatened with downsizing or elimination indicated that they attributed diminished program status to reduced state and local funding. These findings suggest that gifted programming is more at risk in states without mandates and poor economic health.

state funding and mandates on local gifted programming. Schools in states with mandates were 2-2.7 times more likely to offer gifted programs, and served a higher percentage of students, than schools in states without mandates. The possibility exists that NCLB legislation has influenced programming and mandates since these studies were conducted in 1994, making it difficult to generalize the findings to current day.

State mandates may influence the perceived quality of gifted programming. Schneider (2006) conducted a study to determine whether state mandates and accountability measures aimed at improving education for gifted students in Iowa influenced the perceptions of middle school teachers and principals related to gifted programming. Changes in the perceptions of principals and teachers were found for most components of the mandate from its inception to the time of the study. Nearly half of the respondents (45%) indicated that the mandate and accountability measures strengthened gifted programming. Major components of the provision were onsite accreditation visits, endorsement in gifted and talented education for teachers and the provision of in-service for teachers. These findings suggest that a mandate tied to accountability measures might positively influence programming for gifted students. The quality of gifted programming prior to the implementation of the mandate may have had significant influence on teacher and principal perceptions of change in this study. Further studies investigating the feasibility and desirability of mandates and accountability measures focused on the achievement of gifted students would be valuable. Moon et al. (2002) reported that a majority of middle school teachers (n=76) viewed state mandates (59%) or national mandates (81%) as neither helping nor hindering their efforts to differentiate for gifted students. It is possible that this difference in perception reflects a change in educational
focus over the four years between the two studies that may have been influenced by the implementation of NCLB. It is not possible to fully interpret the level of influence that accountability measures, in addition to the state mandate, had on the findings in the study as this aspect fell outside the scope of the research (Schneider, 2006).

The implementation of a state gifted education policy may influence specific components of gifted programming. Swanson (2007) conducted a case study in which the researcher explored the implementation of South Carolina’s gifted education policy from the perspectives of policymakers (n=5), linkers (n=19) and adopters (n=26). Swanson collected data through document review and interviews. School-based personnel, including administrators, teachers and gifted specialists, were included in the adopter group. Adopters reportedly perceived that the teacher endorsement and required coursework (six hours) in the policy initiative had a positive influence on gifted programming. This group also reportedly observed that the policy implementation generated changes in identification practices that improved access and equity for minority students. Adopters expressed concern with the increased focus on standards-based instruction, despite the state gifted policy implementation, and reported believing that the policy could go farther and address concerns about developing general educators’ understanding of needs and appropriate expectations for gifted students. Adopters and linkers (state boards of education, university professors, superintendents) reported a perceived need for further professional development in gifted education for both teachers and administrators to improve curriculum and instruction for gifted students. Accountability and funding levels were not reported in this study, and it is possible that the policy implementation may have been influenced by these factors.
Many researchers who have studied the influences of mandates and policies on gifted programming have used data from single states, limiting the generalizability of these studies. Disparities in policies, mandates, and funding between states leave researchers with few commonly adopted components upon which to make generalizations. The reliance on survey data in these studies to determine the influence of mandates on gifted programming practices is questionable, since an empirical link between self-report data and actual practice has not been established.

**Synthesis of the Literature Related to Political Factors**

Political factors that might influence gifted education include federal legislation, state policies, and state mandates for gifted programming. Missing from the literature are studies in which researchers explored the influence of local politics on gifted education. The findings in the literature reviewed suggest that federal NCLB legislation has influenced the quantity and quality of learning opportunities available to gifted students, despite the absence of federal mandates for gifted education. Teachers' increased instructional focus on struggling students and limited instructional focus on gifted students since the inception of NCLB are reported consistently in the research. Many researchers have relied on survey data, but observational data support the claim that teacher practice has changed in response to the pressures placed on teachers by administrators to ensure that struggling students achieve proficiency on standardized assessments.

In the absence of federally mandated or monitored gifted education requirements, policy decisions related to gifted education are made at the state or local levels. State mandates and policies related to gifted education appear from the findings in the
literature to positively influence the programming available to gifted students; however, the data are primarily survey data that report perceptions or self-reported practices and may not reflect actual program practice. The findings in the literature reviewed suggest that accountability measures for local implementation of mandates and policies may enhance local gifted programming, but these findings are limited to self-reported perceptual data.

Although the research on local politics is scarce, the findings in the literature reviewed suggest that federal and state political factors may influence gifted education politically at the local level. Where state mandates and policies exist, local school districts are left with the responsibility to implement required programming with or without funding. In states without mandates, local districts have control over programming and the responsibility to acquire funding if state funds are absent. This leaves the majority of decisions related to gifted education in the hands of local administrators. Virtually no research has been published to investigate how and why administrators make policy and funding decisions related to gifted education.

Economic Factors that Influence Gifted Education

Federal, State, and Local Funding Systems

Federal funding of gifted education is limited to the Jacob K. Javits Gifted and Talented Student Education Program, which has experienced fluctuations in funding since its inception in 1998. Funding was limited to $7,463,000 in 2009. Competitive discretionary grants available through this program fund research and projects that focus on identifying and serving traditionally underserved gifted students including economically disadvantaged, limited-English proficient, and disabled students (NAGC,
2010). With federal funding confined to this program, and the discretionary nature of the disbursement, the funding of most gifted programming is left to states or local school districts.

State agencies employ allocation systems to fund gifted education that may influence programming at the local level. State agency personnel allocate funds to schools to aid with special populations by employing one of several methods identified by Baker and McIntire (2002). Weighted systems apply a funding weight associated with specific student needs. When applying this funding system to gifted education aid, smaller districts may not receive enough aid to fund adequate programming. Flat grant funding, or census-based funding, allocates funding based on identification of gifted students or assumes a fixed proportion of students across districts. This funding method may not account for differences in numbers of gifted students between districts, and small districts with few gifted students may not be sufficiently funded under this system. Resource-based funding provides specific resources, most often in the form of staffing, to districts. Often, the resources are based on numbers of enrolled students (census-based component), assuming a similar proportion of gifted students to the general population between districts. This funding system disregards other resource needs, such as instructional materials and equipment. A percentage reimbursement system bases the level of funding for school districts on the prior years' program expenditures, leading to disparate funding across districts since wealthier districts tend to offer more programming. Discretionary grant funding requires districts to prepare a proposal for improvement to already-existing programs, and is often competitive. This type of funding is not generally considered appropriate for special education funding; however in
1993-1994, nine states reported using discretionary grants to allocate state funding for gifted education (Baker & Friedman-Nimz, 2004). Furthermore, the only federal funding for gifted education research and program development is the Javits program grant, which is a discretionary grant that fluctuates yearly in the level of funding and availability of grants.

In the absence of federal funding, the fiscal responsibility to support gifted education falls to states or local districts. The 2008-2009 State of the States in Gifted Education Report (CSDPG-NAGC, 2009), published jointly by the National Association for Gifted Children (NAGC) and the Council of State Directors of Programs for the Gifted (CSDPG), offers the most recent data related to gifted programming in the United States. The survey findings suggest that funding for gifted programming is disparate within and across states. Of the 32 states that have mandates for some type of gifted education, five states do not fund the mandate, and fewer than 18% fully fund the mandate. No state funding is provided by 13 states, and five states provided $1 million or less in funding. The lack of mandates and/or funding in many states establishes a system that both requires and allows control of gifted programming and funding to local districts, perpetuating the disparities. In a policy analysis study, Baker (2001) found that local districts make decisions about programs based on the cost of the services, the ability of the community to pay for the services, and the desire of the community to provide the service. In states without funding, the socioeconomic status of local communities may influence the value placed on gifted education and the ability to pay for programs, further increasing the disparity in programming between districts.

These findings raise concerns that the current allocation systems do not ensure the
equitable distribution of funds for gifted programming. It appears from the literature that smaller school districts and schools serving lower socioeconomic groups may be at a funding disadvantage under certain allocation systems. The paucity of research available to guide policy makers may contribute to the continued disparate funding issues.

**Equity in Funding**

Disparate funding may lead to disparate programming, raising questions about equity in gifted education. Equity concerns in funding for gifted education are related to special educational needs, cultural diversity and socioeconomic status. Gifted students have special educational needs that are different but analogous to the needs of special education students. Baker (2001) conducted a policy analysis of school districts to examine the equity issues associated with funding for gifted education in Texas. He adopted a resource-cost conceptual approach that implies that students at both ends of the learning continuum require supplemental resources to some degree. In Texas, mandates for programming and identification are in place, and funding for gifted education is provided to school districts. Baker (2001) found that the average supplemental expense to Texas districts was $2,910 for special education students and $698 for gifted students. The widely disparate funding between these two groups of students with special educational needs raises questions about the relationship between educational need and funding. In some states, special education allocations are based on free and reduced lunch criteria having little to do with student academic need.

Funding systems that base funding on academic need require a clear understanding of student need (Baker, 2001). Defining need for gifted students is difficult, due in part to the lack of a commonly accepted and applied conception or
definition of giftedness (Baker & Friedman-Nimz, 2004). As it stands now, individual states, and in some cases local districts, define giftedness independently, establishing the educational needs of gifted students based on these definitions. This leaves local or state districts with complete autonomy in making decisions regarding funding and level of service for gifted education. This may contribute to disparate funding between districts and states.

Gifted students from culturally diverse or economically disadvantaged backgrounds may not have equal access to gifted programming. Baker (2001) found that Asian/Pacific Island students were more likely than Native American (25% as likely) or Hispanic (62% as likely) students to attend schools in Texas with gifted programming. Students in schools serving larger populations of economically disadvantaged students were less likely to attend schools with gifted programs. Students in larger schools (400+ students) were six to eight times more likely to attend schools that offered specialized gifted programming than students in very small schools (<50 students). The larger districts funded gifted programming at higher levels, but this might reflect the influence of the weighted state allocation system. The findings suggest that the allocation system implemented by states may influence the equity of funding, especially in relation to school size, cultural and socioeconomic status.

Baker and Friedman-Nimz (2004) attempted to link state mandates, funding and school-level gifted services through an analysis of data from the Common Core of Data 1993-94 and the Schools and Staffing Survey 1993-94. Schools in states with mandates and funding were more likely to offer gifted programs. Schools serving students of higher socioeconomic status (0% poverty) were 80% more likely than average to offer a
gifted program if state funding and mandates were in place. Schools with economically disadvantaged students (100% poverty) were 23% more likely than average to offer gifted programs in states with mandates and funding. These findings suggest that mandates and funding together may increase the level of gifted programming at the local level.

Students in states with funding only, or mandates only, were less likely than average to attend schools with gifted programs. This suggests that state funding alone may not support gifted programming at the local level, and that other social, political or educational factors may have more influence on decisions related to gifted programming. Schools in states without mandates or funding offered gifted programs at levels that were well below average, regardless of the poverty level of the students.

The literature suggests that inequities in funding for gifted education exist, regardless of the funding status of states. The Texas study (Baker, 2001) suggested disparity in funding between districts within the same state can exist. The Texas study suggested the size of the school, and the socioeconomic status and cultural background of students, contributed to these inequities. The disproportionate spending on special education students, compared to gifted students, may be related to the lack of mandates for gifted programming, the influence of values on funding decisions related to these two groups, or the inability of educators to accurately identify the needs of gifted students. The studies in this section are limited to policy analysis studies. Policies may not accurately reflect the implementation of programs. Further research that links policy with practice is needed.
Limited Resources and Staffing

Lack of resources and staffing can undermine the quality of gifted programs. Van Tassel-Baska (2006) conducted a content analysis of evaluations from 20 urban, suburban and rural districts representing three states. All districts indicated inadequate or nonexistent funding and a lack of resources at the teacher and gifted coordinator levels. Gifted specialists were given multiple responsibilities including teaching, provision of consultation, and maintenance of programs. The evaluations suggested many teachers with responsibilities for gifted programs were overburdened. In some cases, special education caseloads were limited to 60, while gifted educators were responsible for 300 students in addition to classroom and school-wide responsibilities. Respondents indicated that the lack of funding for professional development and materials hamper efforts at program improvement. The gifted programs evaluated in this study represented different types and levels of gifted programming, variations in gifted specialist training, and school factors that may have influenced the findings. It is possible that selection bias occurred when including program evaluations in the study. More research is needed to examine the impact that various levels and types of funding have on local districts’ capacity to adequately supply and staff gifted programs.

Synthesis of the Literature Related to Economic Factors

The few research studies investigating the economic factors that influence gifted programming are limited to policy analysis and program evaluation studies. The findings of these studies, when considered together, suggest that funding for gifted education is inequitable and widely disparate between states and districts. Limited funds and resources can hamper professional development and program improvement efforts.
Policy analysis studies provide data on gifted policies related to funding that are more objective than the survey data that is prevalent in gifted education research, but the assumption that federal or state policy translates into intended practice locally may not be warranted. It appears from the findings in the literature that funding and policy implementation decisions are often made at the local level, and more research is needed to identify economic factors that influence gifted education locally.

Implicit in the funding disparities identified in the literature, and the finding that local communities base gifted programming decisions on the cost and ability to pay for services in conjunction with the value of those services, is the suggestion that other factors play a role in funding allocation and/or local decisions related to expenditures on gifted programming. Studies that examine the economic factors that influence administrators’ decisions related to gifted education are nonexistent in the published literature. Missing from the literature are studies that attempt to reveal relationships between the political, social, educational and economic factors and gifted education issues.

**Social Factors that Influence Gifted Education**

**Attitudes, Values and Beliefs**

School administrators hold attitudes towards gifted students and programs that may influence their decisions related to gifted programming, gifted students, or teacher practice. The findings of several dissertations suggest that administrators hold positive attitudes toward gifted programs in general. Barstow (1981) surveyed Texas Board of Education members (N=212) and Superintendents (N=50) and found that, generally, Board of Education members held less positive attitudes toward gifted programming than
superintendents. Although 66% of the board members and 76% of the superintendents indicated that gifted students required special programming, board members (70%) and superintendents (72%) were against specific services, such as early admission to kindergarten. Almost half (42%) of the superintendents believed that no credentialing or special training was needed for teachers who worked with gifted students. Dowies (1989) reported, in a cross-sectional survey study, that the majority (88.6%) of K-12 principals from large districts held stated beliefs that gifted students required special provisions, and 75.9% felt a state mandate was needed to insure adequate programming. These findings suggest that administrators espouse attitudes that are supportive of gifted programs, yet when making actual programming decisions other factors are more influential. This behavior is consistent with Argyris and Schon’s (as cited in Bolman & Deal, 2008) findings that the espoused theories of individuals are often disconnected from their behavior. Administrators may view themselves as more open to supporting gifted education initiatives than their behavior suggests.

Levels of training in gifted education do not appear to influence the attitudes held by administrators toward gifted programming or gifted students. Martin (1982) found no significant differences in the attitudes towards gifted programming of principals who had participated in half-day workshops than those who participated in workshops lasting more than two days. Griffin (1984) found that 71% of the administrators had no coursework in gifted topics, and a small percentage of superintendents (26%) and principals (21%) had one to two courses, but found no difference in attitudes of those that were trained and those that had no training. It is possible that the current political and educational climate has influenced administrators' attitudes toward gifted programming.
since these studies were conducted in the 1980s.

Findings of studies conducted to examine the leadership traits and beliefs of school administrators, during the implementation of a school-wide initiative to improve differentiation practices, suggest that school leaders can influence the ability of teachers' to change or improve their instructional practices. Hertberg-Davis and Brighton (2006) investigated the characteristics of middle school principals during the change process in which teachers in their buildings were learning to differentiate. A case study methodology was used in this three-year study. Three middle schools were selected for the case study, based on variations in administrator style, stability, staff factors, and student demographics. Principals (n=3) and teachers participated in three days of professional development with follow-up coaching for teachers. Coaches collected interview and observational data frequently, and interviewed administrators routinely throughout the study. Emergent themes from the study suggest that principals' attitudes toward differentiation influenced teachers' attitudes towards differentiation. The researchers reported that, when principals demonstrated support in words and actions for differentiation, teachers' differentiation efforts increased.

Teachers reported that they needed administrative support with resources, as well as emotional support, to move beyond their reported uneasiness with the complexities of effective differentiation practices. Administrative commitment to the long process of change and their reported belief in teachers' abilities were key to the success of teachers. In schools where principals believed in teachers' abilities but did not fully embrace the need for change, teachers were less successful. These findings are supported in the organizational learning literature. In a multiple case study, Leithwood et al. (1998) found
that few teachers reported that principals held high expectations for them, but when high expectations were reported, these administrators encouraged teachers to try new strategies and be creative, and communicated the belief that they expected professional growth.

Administrative decisions related to curriculum and instruction can be value-laden and based on assumptions about the general population of students that may not be accurate when applied to gifted students. Moon et al. (1995) conducted a survey study designed to examine and compare beliefs and practices of middle school teachers and principals, related to academically diverse middle school students. A sample of principals (n=500) and teachers (n=449) was randomly selected from a national population, stratified by geographic region and demographic data. Administrators and teachers reported holding similar beliefs regarding the nature of middle school students. These self-reported beliefs may have influenced the level of expectations and rigor provided for gifted students in the general classroom. Administrators and teachers reported viewing middle school students as more social than academic (P=78%, T=84%) and as being concrete thinkers (P=73%, T=76%), and a majority of the principals (67%) and teachers (83%) did not see the middle school students as high-level thinkers. These assumptions about middle school students are not generally characteristics that are representative of gifted students, so curricular and instructional decisions based on these assumptions may have negative implications for gifted students.

Principals and teachers ranked factors that influenced curricular and instructional goals. "Learning to learn" was ranked first by both principals and teachers, and both groups ranked "mastering basic skills" and "knowledge of core curriculum" as second.
Although considered “somewhat important”, “advancement of existing student talent” was ranked last by both principals and teachers. In survey items related to factors influencing instructional decisions, “modification of curriculum and instruction” was ranked fourth by principals and sixth by teachers, and both groups ranked “student ability to choose tasks” and “provisions for students to work at their own pace” among the last.

The priorities that administrators set for curricular and instructional focus are often informed by underlying values that are sometimes conflicting. When making instructional decisions, principals and teachers ranked remedial/at risk students as most influential in informing those decisions, with principals ranking special education students second, and gifted/advanced students third. Teachers rated gifted/advanced students as second, and special education students third. Both groups ranked culturally diverse students as last (fourth). Principals set a lower priority for gifted/advanced students than did teachers in making decisions regarding instructional planning, which might suggest that principals were either less aware or placed a lower priority on the needs of gifted students. It is difficult to interpret rank-order data with certainty, because the ranks are relative to one another. These findings are consistent with those of the Reis et al.’s (2003) reading study in which principals indicated that, although they were concerned about the progress of gifted readers, they felt the pressures of testing and equity issues forced them to focus most attention on nonproficient readers.

The studies reviewed in this section suggest that the values and attitudes of administrators can influence instructional decisions and teacher attitudes related to gifted education. A preponderance of research on this topic is done through survey studies, yet attitudinal data collected through surveys requires cautious interpretation. The espoused
values of administrators appear to be inconsistent with their practice, illustrating the limitations of survey data to make conclusions about practice. Research is needed to explore the role that conflicting values, assumptions, and perceptions related to gifted education play in administrators' decisions and teachers' practice.

**Values in Decision-Making**

No studies examining administrative problem-solving and decision-making related to gifted education were located during the literature search. However, the research based in the general educational leadership literature has implications for gifted education. Perspectives that are grounded in values and role perceptions that were initially established in childhood may influence principals' decisions. McGough (2003) conducted a comparative case study of 23 principals, and found that childhood notions of schooling established in elementary school continued to influence the professional perspectives and decisions of principals well into their careers. This tendency to hold onto values and perspectives acquired during childhood might influence principals' ability to embrace change or reform initiatives. With limited childhood, preservice, or in-service experiences in gifted education, principals may not perceive the value or need for change in gifted education practices. Furthermore, McGough (2003) found that principals' decisions and practices were influenced by the daily demands of their leadership role, their leadership style, and the ideas of peers and colleagues. McGough found little influence of researchers, scholars or staff developers on principals' decisions. McGough's findings suggest that principals' decisions may be influenced by contextual factors, including job demands and peers, more than research-based information.

Administrators may be influenced by personal and family values when making
decisions. Marshall (1992) reported that, when faced with ethical decisions, school administrators (N=26) were guided by religion and family/personal values. The principles of justice, equity and fairness influenced many of the participants' decisions. The implications for gifted education depend on administrators' interpretations of equity and fairness, which these studies suggest are strongly influenced by personal lifetime experiences and values. If administrators prioritize the needs of remedial students above those of gifted students in instructional planning, as discussed previously (Moon et al., 1995), it is possible that these priorities are based, at least in part, on concerns related to equity and fairness with roots in family and religious values.

Administrators make decisions based on external and school-related influences within their own belief systems. Heck, Marcoulides, and Glasman (1989) investigated the decision-making processes of school administrators related to teacher allocation decisions. Survey data from elementary administrators (N=169) indicated that self-reported personal beliefs about student and teacher matching, internal political concerns, parent input, and organizational concerns directly influenced their decisions. Political processes and organizational conditions influenced principals' decisions, but only within the construct of principals' own belief systems.

The literature suggests that school administrators are influenced in their decisions by factors that include organizational, ethical, political and long-held personal values and attitudes. Administrators make countless decisions each day, and are often required to weigh competing needs and wants. The pressures administrators feel to improve test scores for struggling students may amplify the role that the values of justice and equity play in gifted education decisions.
Conceptions of Giftedness

Many conceptions of giftedness have emerged in the literature over the last several decades. There is no consensus among experts for one single definition or conception and some conceptions are contradictory. Ignoring this factor can influence the design of programming for gifted students, as program design is dependent upon the conception of giftedness adopted. To maintain alignment with the research questions focusing this study, the literature in this section is limited to empirical studies in which researchers examined conceptions of giftedness held by school administrators and teachers.

Administrators, teachers and gifted education specialists accept many broad conceptions of giftedness. Schroth and Helfer (2009) identified and compared educators' beliefs about expert-created conceptions of giftedness, and factors that influence placement in gifted programs. A random sample (n=411) of administrators, gifted education specialists, and regular classroom teachers from K-5 public schools was selected for the descriptive survey study. Educators were asked to rate various conceptions of giftedness based on traditional concepts of general intelligence, inclusive conceptions such as Renzulli’s, Sternberg’s and Gardner’s conceptions, and conceptions related to visual and performing arts. Overall, the vast majority of the educators from all groups agreed, or strongly agreed, with all of the conceptions to varying degrees. A large percentage of administrators and educators strongly agreed with inclusive conceptions such as a combination of above-average ability, creativity and task commitment (A=89%, T=92%), creative or productive thinking (A=96%, T=100%) and those based on more traditional conceptions of general intellectual ability (A=85%, T=76%), and specific
academic aptitude (A=85%, T=76%). Administrators and teachers also strongly agreed, or agreed, with the conceptions of giftedness in visual arts (A=75%, T=75%), music (A=77%, T=75%), dance (A=68%, T=74%), and theater (A=70%, T=75%). The researchers asked educators to rank order 21 factors that influence placement in gifted programming. Educators ranked the combination of above-average ability, creativity and task commitment first (M=4.04, SD=4.51), high degree of analytical abilities second (M=4.49, SD=2.91), and general intellectual ability third (M=4.66, SD=3.21). Talent in theater (M=16.52, SD=11.49), dance (M=15.86, SD=5.39), and bodily kinesthetic intelligence (M=14.98, SD=4.76) ranked at the bottom.

The researchers concluded that the data suggest confusion among educators regarding conceptions of academic giftedness. There might be an argument that the survey design of this study played a role in the "confusion", based on the similarity of responses for all conceptions. It is unclear if educators were asked to agree with conceptions of giftedness or conceptions of academic giftedness in the survey. Giftedness exists in the visual and performing arts, sometimes independently of academic giftedness. A majority of educators agreed with visual and performing arts-based conceptions of giftedness, but ranked these lower in influence in making decisions regarding gifted programming. This might be explained by limited programming for the visual and performing arts in these schools, rather than confusion of the concepts.

Teachers tend toward accepting traditional conceptions of giftedness. Moon and Brighton (2008) surveyed a stratified random sampling of K-2 teachers (n=6062) to investigate their reported beliefs related to talent development in primary age students as the first phase of a larger mixed method study. A low response rate (14%) yielded 434
respondents from urban, suburban and rural school districts with varying poverty levels. The researchers presented respondents with four case studies describing profiles of different types of students—one exhibiting traditionally identified talents and the others demonstrating talents obscured by other characteristics (poverty, non-native speakers, and social/emotional needs). Moon and Brighton found that primary teachers were more willing to accept positive characteristics as evidence of giftedness, and least likely to accept traits categorized as negative as possibilities in giftedness students. Teachers had difficulty imagining students who “give smart-aleck answers” (M=1.92, SD=.71), “have difficulty remaining in seat” (M=1.94, SD=.63), or “have difficulty moving on to another topic” (M=1.91, SD=.66), as potentially identified gifted students. The majority of teachers held traditional conceptions of giftedness, with indicators of strong reasoning skills, a large storehouse of knowledge, language abilities, and advanced vocabularies. The teachers had difficulty conceptualizing giftedness in students who exhibit characteristics often found in students from lower socioeconomic backgrounds or students with little preschool experience. Responses indicated that teachers more frequently focused on the deficits of students’ profiles, and referred students for remediation of those deficits, with little attention given to the strengths of the students. The low response rate in this study may indicate bias in the sample and raises questions about the validity of the study.

Miller (2009) conducted a study using a theory-drawing methodology. Classroom teachers from grades 2-5 (n=60) were asked to graphically represent their theory of giftedness and rank the included characteristics. Participants had difficulty imagining a gifted child without creativity, broad knowledge, and vocabulary skills. The participants
more readily accepted a lack of social or interpersonal skills as possible behaviors of gifted students. Characteristics prevalent in diverse cultures were not as highly valued by participants, yet more traditional conceptions were. The majority of participants in both the Moon and Brighton (2008) and Miller (2009) studies were White, raising the possibility that cultural bias or unawareness influenced participants’ conceptions of giftedness. There was no statistically significant difference between the conceptions of participants with endorsements in gifted education and those with less formal training. This finding may represent a limitation of the training received, or a suggestion that assumptions and values about giftedness may be too well established to easily change.

These studies suggest that most teachers hold a traditional conception of giftedness, leaving little room for conceptions that include traits that are valued by cultures that fall out of the traditional conception. Culturally diverse gifted students may be at a disadvantage in identification systems that stress traditional conceptions, leading to lower representation in gifted programs. Disparate conceptions of giftedness leave school administrators and teachers without a common language to discuss the needs of gifted students, appropriate services, and evaluation of program efforts. This may contribute to the disparities in programming between districts and states, and influence the decisions made at all levels about gifted programming. The research reviewed in this section is limited to teachers’ conceptions. There is a need for research that investigates how school administrators’ conceptions of giftedness influence the instructional and organizational decisions related to gifted education.

Synthesis of the Literature Related to Social Factors

Limited research has been conducted to examine the social factors that influence
the practices of administrators and teachers related to gifted education. The decisions made by administrators are often influenced by conflicting organizational and political demands; yet, decisions are made within the context of an existing value system. Administrators' decisions related to gifted education may be influenced by personal values that are based in equity concerns. Administrators and teachers may rely on values associated with equity to justify their decisions, resulting in an imbalance in time and instructional focus between struggling and gifted students. There is no empirical evidence to suggest that the positive values related to gifted education that are often articulated by administrators are translated into practice. Research that establishes a link between administrators' espoused values and the instructional and organizational decisions they make is needed.

The absence of a commonly held conception of giftedness in the field of gifted education continues to implicate research study design and may be a contributing factor to the disparities and inadequacies in gifted programming in the United States. Low expectations for gifted students, the willingness of teachers to accept traditional conceptions of giftedness while rejecting conceptions that are more culturally responsive, and the application of the values of equity and justice to educational decisions may be influencing gifted education. If, as the research suggests, administrators make decisions based on experience, assumptions, and values often acquired in childhood, the field may continue to experience the perpetual cycle of value-laden decisions that drive local programming in gifted education. The lack of a consistent conception of giftedness leaves researchers with samples that are weakly comparable, making generalization of findings difficult.
Experts and Expertise

The Delphi study, by its very construct, relies on the knowledge, experience and informed judgment of experts for validity. Early conceptions of expertise built on Galton’s proposal that expert performance is due to innate mental abilities. Measurements of mental ability as criteria for entrance into professional schools are based on the idea that some individuals have innate potential that others do not (Ericsson, 2006). Recent research (Ericsson & Lehman, 1996) suggests that measures of general mental capacity are not valid indicators of expertise, since expertise is limited within a specific domain, even when the domains seem similar (Feltovich, Prietula, & Ericsson, 2006).

The specificity of expertise to one domain lends support to the use of experts from seemingly similar domains within this study to investigate the research problem. Experts are subject to inflexibility when confronted with changes to problems within their domain. Chi (2006) suggested that, due to superior knowledge in the domain, “functional fixedness” can create a bias toward solutions within the domain and limit the expert’s ability to generate new solutions outside of their knowledge realm. This concept might explain the persistence of the problem investigated in this study, and the limited attention given to the problem outside of the field of gifted education. By structuring the Delphi study to foster communication between experts with different perspectives on the problem, the participants can create a shared mental set (Mitroff & Turoff, 1975), minimizing the influence of functional fixedness in the study.
Delphi methodology is dependent on valid indicators of expertise for selecting expert panelists. Chi (2006) identified two approaches to conducting research on expertise—absolute and relative. The absolute approach utilizes some measure of performance to identify and study exceptional people. The relative approach studies experts and expert performance in relation to novices and novice performance. This approach distinguishes experts as having acquired more knowledge, which is represented differently than nonexperts, but assumes that novices can achieve expertise and mastery by moving through a growth continuum. For the purposes of this study, the researcher will adopt a relative approach in identifying experts.

Experts can be identified using social proficiency criteria by which others have afforded them the status of expertise relative to novices, by lengthy experience in a domain, or by criteria based on performance tasks specific to the domain (Hoffman & Lintern, 2006). Two of these criteria, social proficiency and domain performance criteria will be used in the established criteria for inclusion in this study. Ericsson and Lehman (1996) suggested that experience does not always predict expertise. Their research shows that people often improve their performance through experience, never going beyond an acceptable performance level to develop expertise. Length of experience will not be used as criteria in the study, as it is not supported in the research.

Research studies to investigate the development of expertise have examined the products or experiences of experts from varied disciplines and time periods. These studies have substantially informed theory and practice in gifted education. The focus for this literature review, however, will be limited to studies that elicit knowledge or
judgments from experts in education, providing a foundation upon which to build the Delphi study.

Gifted Education Research Studies with Experts

Relatively few research studies have been conducted with samples of experts in the field of gifted education. Due to the orientation of Delphi research on the present and future, there is a need to build on the most current research. This section of the review will be limited to studies conducted in the last decade.

Several research studies that elicit responses from experts in the field of gifted education have been published in the literature. Most of these studies employ traditional survey methods in data collection with varied sample sizes and criteria for expertise. Pfeiffer (2003) surveyed gifted education experts (n=64) regarding their views related to recent and future trends in gifted education. The sample of experts (n=142) was identified based on three criteria: (a) participation as officers or board of directors of the National Association of Gifted Children, (b) editorial board members of professional gifted education journals, and (c) first authors of three or more published journal articles in the field of gifted education. Experts were offered the option of responding, either on paper or through e-mail, to the survey, which consisted of five open-ended items. Statistical analysis was conducted, using the calculation of endorsement percentage or the number of participants who gave a response to a category of responses. Major areas of concern emerging from the categorized themes of responses included lack of consensus on defining or conceptualizing giftedness (94%), lack of depth, breadth and specificity of curriculum (84%) and lack of curricular options (44%). In the category of most important research findings and developments of the five years preceding the study,
noteworthy responses included educational innovations (75%), enhanced learning opportunities (56%) and novel views of giftedness and human potential (50%).

The experts who participated in this study averaged publication of 3.7 books and 31.6 articles or chapters in literature related to gifted education. Research is needed to involve participants from parallel fields to gain a broader perspective of the issues and problems afflicting gifted education. The participants responded independently and anonymously to this survey. The anonymity fostered independent thought, and perhaps minimized “group-think” effects, but the survey is limited to the perceptions of experts in gifted education alone.

Rizza and Gentry (2001) surveyed six gifted education experts, examining their perceptions of past, present and future issues related to gifted education. Experts responded to three research questions in writing or in personal interviews, based on their preferences. Expert respondents were given the opportunity to edit their responses in the final article to address reliability. Themes that emerged from the data were the contributions that gifted research findings have made to general education, the necessity of general education teachers to understand the unique needs of gifted students, and concerns with the availability of methods and materials to meet those educational needs. In relation to pressing issues and actions to meet these challenges in the future, experts identified the following as most important: the need for the field to anticipate changes, to continue with research that is practice-centered, and to address and influence the way teachers learn about gifted education in light of the pervasiveness of inclusion practices. This study suggested that experts recognize the impact that inclusion has had on gifted education and the need for action to improve professional development in gifted
education for general education teachers, but fell short of eliciting suggestions for actions leading to change. The survey sample was small, and the criteria for selection of experts was not defined, limiting the validity of this study.

A handful of dissertations have focused on eliciting expert response through use of the Delphi method. Of 15 Delphi studies related to gifted education appearing in the dissertation literature since 1981 (UMI ProQuest Digital Dissertations), only three have been conducted in the last decade. Smith (2000) conducted a Delphi study to elicit a consensus from experts on identification measures for gifted programs that would be inclusive for traditionally underrepresented student populations. Experts were reported to have made contributions to the literature in multicultural and minority education, gifted education and special education; yet, no specific criteria for participation were reported in the study. The final panel (n=50) included participants from the fields of psychology, special education administration, ethnic/cultural studies, teacher education, and gifted and talented. In Round One, panelists were asked to add or delete identification strategies from a list provided. In Round Two, participants were given the modified list based on the first round, and were asked to rank the strategies from least equitable and inclusive to most equitable and inclusive. The panelists were given a summary of findings and suggestions for future research in Round Three. Researchers reported that a consensus of the experts was achieved on the need for identification profiles that include multiple measures, inclusion of activities that require creativity, and the use of local norms in interpreting assessment criteria. A weakness of this study is the lack of criteria for expert selection, leaving questions about the validity of the results. The author did not mention any review of the initial round questionnaire, which is optimal in Delphi research.
Finally, there was no analysis in the study of the differences in responses between groups of respondents that may have offered more insight into the problem.

Kelley (2002) investigated the perceptions of middle school science teachers (n=21) and science coordinators (n=29), regarding the strengths and weaknesses of a differentiated science curriculum and the steps needed to develop an effective differentiated science curriculum for middle school students. Criteria for expert participation in this Delphi study required that participants possess basic knowledge of the problem, a high degree of objectivity, and have time to participate. Additionally, the sampling procedure did not support expert participation. Science coordinators and teachers were randomly selected (50%) from a pool of 100 members of two professional organizations in Texas. The teachers and coordinators had varied levels of experiences, positions, and certifications. The study was conducted in three rounds. The first round solicited responses to open-ended questions, and the second asked panelists to rank the themed responses from Round One on a Likert-type scale. Attrition of the sample occurred at this point, with 23 coordinators responding and 12 teachers participating in Round Two. Round Three attempted to reconcile those items that had not reached consensus. Science coordinators and teachers reached consensus on items including: “teachers do not know how to differentiate” (Coordinators: M=4.37 with an Inter Quartile Range of 1.00; Teachers (M=4.75, IQR=.75), and “all students require higher level thinking experiences and support, not just gifted students” (C: M=4.58 IQR=1; T: M=4.25, IQR=.750). The item receiving the least consensus was the statement that 30 hours of training were needed to teach gifted students (C: M=2.32, IQR=1; T:M=4.33, IQR=1). Future trends identified as most important by both groups were depth and
complexity of curriculum, and integration of technology. The researcher did not analyze the differences in responses or relative rankings between the two groups. These findings might have contributed to an understanding of the similarities and differences in perceptions between administrators and teachers relative to gifted education.

Champion (2007) conducted a Delphi study to investigate the impact NCLB might have on the future of gifted education. The sample included 25 experts identified by their professional experiences associated with the future of gifted and talented. The panel included authors, presenters, gifted program planners, gifted policy developers, and members/officers of organizations concerned with the future of gifted education. A panel of five gifted experts aided in the development of the first round questionnaire. In Round One, experts were given the opportunity to add to the trends already identified, and to comment on the future direction of the study. In Round Two, the researcher fed back the results and asked experts to rate the trends on a 20-item Likert-type scale. Questionnaire items that had a consensus rating lower than 85% were targeted for further comment, revision, and/or clarification by the experts in the third round. The experts in this study agreed that NCLB will continue to impact gifted education negatively in the future by focusing on minimal standards and marginalizing the focus on the achievement of advanced learners. They identified areas of future need, including increased funding, to insure accountability, an increased focus on preparation of teachers including graduate level coursework, and legislative and policy changes as essential to the future of gifted education. Collectively, the experts expressed serious concern for the ability of the nation to compete in a global society if these trends continue. This study was limited to experts within the field of gifted education only.
Synthesis of the Literature Related to Experts and Expertise

Many of the findings in the studies using expert samples support the research findings included in the preceding sections of the literature review. Experts identified lack of consensus related to conceptions of giftedness as a serious issue. The literature revealed this lack of conceptual consensus and its influence on gifted programming and research validity. Experts in these studies identified the need for increased funding, policy, and legislation related to gifted education, supporting the literature reviewed. Furthermore, the experts appear to have predicted the need to educate general education teachers in gifted education topics, in light of increasing inclusion practices and the standardization movement.

Of the five studies utilizing experts reviewed in this section, three were dissertations utilizing the Delphi method. Two of the three Delphi studies were consensus Delphis, and the other was a modified policy Delphi study. The two non-Delphi studies utilizing experts were survey studies conducted by published authors in the field of gifted education, both eliciting expert response to the issues impacting gifted education. These studies, and the policy Delphi dissertation study, used expert panelists from the field of gifted education only. The other two dissertations elicited responses from experts representing different domains.

Methodological concerns revealed in the studies reviewed in this section suggest possible pitfalls to avoid when designing Delphi studies. A review of the Round One questions will increase the likelihood that all relevant issues have been considered, leaving experts with the responsibility to add, delete, refine or defend judgments about Round One items (Scheele, 1975). This minimizes the time required by the experts in
Round One, eliminating the need for experts to restate obvious issues already well established in the problem area. Criteria for selection of expert panelists must be well researched and well defined to insure validity of the study. One final consideration when planning Delphi studies arising from this literature is the need to analyze the responses of participant by domain or specialty. None of the studies reviewed did this. This type of analysis can be used to determine if differences in perception are role-based, or if there is agreement between participants with expertise in different domains.

**Summary of the Literature Reviewed**

The literature included in this chapter exposes enduring problems in research and practice related to gifted education. Appropriately differentiated curriculum and instruction may not be provided with any regularity in schools, and teachers may not have the pedagogical capacity to meet the needs of gifted learners in general education classrooms. The negative impact of NCLB legislation on gifted education is most acutely evident in the research, suggesting an increased focus of teachers and administrators on helping struggling students achieve proficiency at the expense of gifted students.

A critical area of concern emerging from the literature is access to high quality professional development in gifted education for general education teachers. Minimal requirements for engagement with gifted topics in teacher preparation programs, and inadequate access of many teachers to professional development focused on developing capacity to educate gifted learners are findings that appear consistently in the literature. There is evidence that little or no accountability exists for teachers' differentiation practices related to gifted students, either through the supervisory practices of local administrators' or state assessments requiring measurement or reporting of gifted
students' academic growth. Disparate state mandates and accountability measures to ensure adequate programming for gifted students contribute to the persistence of the problem. The finding that many funding, policy and educational decisions related to gifted education are made at the local level illustrates the need for a line of inquiry in the research literature that is focused on the role school administrators' decisions play in the local gifted education improvement.

The literature reflects some methodological concerns in the field. The lack of a consistent conception or definition of "gifted" has created an issue in the comparability of samples of identified gifted students within and across studies. It is difficult to conclude with any certainty that a specific type of professional development intervention impacts teacher practices for gifted students, since levels of student "giftedness" influence teacher practice. Without common identifiers of "giftedness", the variance in the samples of gifted students has compromised the validity of the research in the field. A related problem of sampling emerges in the literature. Much of the seminal and important research in the field originates from the National Research Center for Gifted Children (NRC/GT). Researchers from NRC/GT sometimes use samples solicited from partner districts. These partner districts contact/register with the NRC/GT, and if solicited for participation in a research study, the districts' administrators make the decision whether or not to participate. It is possible that the pursuit of the partnership with NRC/GT represents an interest on the part of only one individual in a district. Although the partner districts do not have an ongoing relationship with the center, the possibility exists that samples from the partner districts have an interest in gifted education that samples from the general population do not.
The literature reveals few attempts to reach out to experts within the field, or to extend research efforts to include experts outside of gifted education. The influences on gifted education are found in the political, cultural and broader educational arenas, and research efforts in gifted education should reflect this reality. The literature included in this review suggests that educational, political, social and economic factors influence decisions related to gifted education at the federal, state and local levels. The interrelationships of these factors, and the influence they might have on local school personnel when making decisions related to gifted education, is yet unexamined in the literature.

The scarcity of research focused on the possible influences on school administrators, and the decisions they make regarding gifted education programming and practice, represents a void in the literature. The investigation of the factors that influence school administrators’ leadership behaviors related to gifted education is a research strand that could contribute to the scholarly literature and to practice. An understanding of the processes and possible organizational barriers to appropriate gifted education in local school districts could inform advocacy efforts, school practice, and research decisions.

Finally, the lack of anticipatory research in the literature may represent the relative “newness” of gifted education as a discipline, compared to other education-related disciplines. Research agendas most prominent in the literature have primarily focused on attempts to:

- Describe and explain the school experiences of gifted students and teachers
• Identify and explain the disparities in student identification, funding, and policy
• Explore ways in which attitudes and perceptions toward gifted students influence programming
• Identify and evaluate professional development experiences in gifted education

This literature has contributed greatly to practice and scholarship, but considering the persistence of the problem apparent in extant literature, research with a futures orientation could make a substantial contribution to explaining and resolving the problem.
CHAPTER III
RESEARCH DESIGN AND METHODS

Research Design

A qualitative descriptive case study design was employed to address the research questions. Researcher Robert K. Yin (1984) described “case study” as a linear, yet iterative research design, and defined it as “an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (p 23). According to Miles and Huberman (1994), a sustained process can be identified as a case. The case in this study is delineated as the influences on school administrators’ decision-making related to gifted education topics within the context of the educational, political, social and economic factors that influence those decisions. Subcases in the study are gifted education, professional development, and school administration experts.

Within the case study research design, a Delphi methodology was applied to allow for the systematic collection of informed judgments from subgroups of experts in the education-related domains of gifted education, professional development, and school administration. Data collection was primarily qualitative, and there was a secondary quantitative method used to collect data from three ratings scales. The purpose for this secondary quantitative measure was to describe the relationship of evaluative judgments between the subgroups of experts. The flexibility in both design and application afforded by the Delphi methodology has been well documented in the literature (Adler & Ziglio, 1996; Delbecq, Van de Ven, & Gustafson, 1975; Linstone & Turoff, 1975), and was a key factor in the decision to apply this methodology in the research design. The flexible
structure of the Delphi technique offers advantages over more traditional qualitative methods of data collection, by permitting the researcher to control the communication process while preserving the anonymity of respondents and maintaining focus of the panel discussion through iterative question development. The focus of the analysis was not on individual responses, but on developing a holistic description of the group response, with analysis of subgroup response to uncover and describe any underlying issues associated with the problem. A decision to maintain a narrow focus for the study was made to allow for the collection of richer, more detailed data on a specific aspect of the broader problem of school-based inequities in gifted education.

**Delphi Methodology**

According to Linstone and Turoff (1979), Delphi methods are best suited for research problems that benefit from the collective informed judgments of individuals who do not commonly communicate with one another, yet have relevant knowledge and experience to contribute to the examination of a complex problem. It offers a group communication process over large geographic areas that might not otherwise be possible. What characterizes the Delphi method, and sets it apart from other methods of survey research, is the provision of feedback to the expert respondents and their subsequent ability to revise or refine their ideas based on the collective group views (Adler & Ziglio, 1996; Scheele, 1975; Skulmoski, Hartman, & Krahn, 2007).

Goals for application of the Delphi method in research vary. The Delphi method has frequently been applied to build consensus among the expert panelists, often in business applications. More recently, Delphi studies have been conducted to elicit numerous and varied alternative solutions and actions to a problem or issue (Adler &
Patton (2002) suggested that constructing future scenarios through qualitative studies such as Delphi studies can be useful "... to help decision makers think about the varying future conditions that could affect the implementation of alternative recommendations" (p 201).

A Delphi study, regardless of the specific goals and methods of the individual study, is conducted through a process of questionnaire administration that is iterative. Each round builds upon the anonymous responses of the expert panelists from the previous questionnaire and analysis. The process can be conducted in numerous rounds of questions, or as few as two rounds (Mitroff & Turoff, 1975; Rowe & Wright, 1999). Most Delphi studies have two phases, an exploratory phase in which experts generate ideas, and an evaluation phase in which panels of experts share their views and assessments of various options or ideas (Adler & Ziglio, 1996). Critical to the process is anonymity from other expert panelists and the provision of feedback to the respondents. Responses for each round of questions are analyzed and fed back to the expert panelists for revision, clarification, or comment. This iterative communication process across a team of experts produces a shared, or common, understanding of varied aspects of the problem and elicits original alternative solutions (Mitroff & Turoff, 1975).

Rationale for Application of Delphi Methods in the Research Design

The rationale for application of the Delphi methodology in the design of this study was multifaceted. First, the structure of the Delphi study allowed for the anonymous communication of a “team” of experts from parallel, yet different, domains within the broader field of education (Adler & Ziglio, 1996; Linstone & Turoff, 1975; Rowe & Wright, 1999). Experts in gifted education, professional development, and
school administration have knowledge and perspectives of administrators’ roles in the
delivery of professional development to general education teachers related to gifted
education that is specific to their domain, but rarely have the incentive or opportunity to
engage in focused communication on the issue. Additionally, across and within domains,
the experts are dispersed geographically, limiting opportunities for discussion. Delphi
methods allow groups to communicate without the necessity to be in one place together
(Delbecq et al., 1975; Linstone & Turoff, 1975). The respondents contribute when and
where they choose, a distinct advantage over other group communication processes
(Adler & Ziglio, 1996).

The research findings in the literature suggest that school administrators have
limited formal education or professional learning experiences related to gifted education.
The design of this study to include experts from parallel fields addresses concerns about
the limited perspective that functional fixedness and narrow expertise in one field would
bring to the study. The structured and iterative communication process of the Delphi
method facilitates the identification of factors that influence administrators’ decisions that
may not be obvious within each domain and encourages divergence in the proposals for
future actions.

Delphi methods offered advantages over other group response methods. The
feedback-response process facilitated the collection of rich data on group, subgroup and
individual thinking as it is evolved, going beyond individual snapshot perceptions that
might have been collected from traditional survey data alone. Clayton (1997) stated, the
“Delphi is a technique for collecting judgments that attempts to overcome the weaknesses
implicit in relying on a single expert, a one-shot group average, or a round table
discussions" (p. 374). In addition, applying a Delphi methodology can limit the negative effects inherent in other group structures such as focus groups. The anonymity provided in the process minimizes negative psychological effects of group communication, such as the bandwagon effect (Adler & Ziglio, 1996; Eggers & Jones, 1998) and other psychological factors associated with personality and status dynamics (Landeta, 2005).

Finally, the flexibility, efficiency and effectiveness of the Delphi methodology are applicable to complex issues (Rowe & Wright, 1999; Skulmoski et al., 2007). The issues surrounding the research problem appear from the extant literature to be persistent and pervasive. Patton (2002) stated, "a futuring perspective involves anticipatory research and forward thinking in order to affect current actions toward creating desirable futures" (p. 201). The identification of factors that contribute to administrators' decisions related to the delivery of professional development, and the utilization of a collective communication process to solicit proposals for actions to foster change represents a novel orientation and a unique approach to the problem.

**Research Questions**

Four overarching research questions and four subsidiary questions frame this study:

1. What factors do gifted education, professional development and school administration experts identify as influential in school administrators' decisions regarding the professional learning of elementary and middle school general education teachers related to the education of gifted students?
   a. What educational factors do experts perceive influence school administrators' decisions regarding the quantity and quality of
professional learning for elementary and middle school general education teachers related to gifted education?

b. What political factors do experts perceive influence school administrators' decisions regarding the quantity and quality of professional learning for elementary and middle school general education teachers related to gifted education?

c. What economic factors do experts perceive influence school administrators' decisions regarding the quantity and quality of professional learning for elementary and middle school general education teachers related to gifted education?

d. What social factors do experts perceive influence school administrators' decisions regarding the quantity and quality of professional learning for elementary and middle school general education teachers related to gifted education?

2. What future actions do gifted education, professional development, and school administration experts propose to mitigate negative factors and/or positively influence school administrators' decisions related to the quality and quantity of professional learning in gifted education for elementary and middle school general education teachers?

3. How do experts rate (a) the level of importance of the factors that influence school administrators' decisions, and (b) the desirability and feasibility of future actions to mitigate the negative factors or positively influence school
administrators' decisions related to professional learning in gifted education for elementary and middle school general education teachers?

4. In what ways, if any, do the perceptions of experts in gifted education, professional development and school administration differ in relation to (a) the importance they place on the influential factors identified by the panel, and (b) the feasibility and desirability of future actions proposed by the panel?

Sample

It is desirable in Delphi studies to obtain samples that include participants with as high a level of expertise as possible (von der Gracht, 2008). Experts in the fields of gifted education, professional development, and school administration were selected for participation on the panel through purposive, criterion sampling. Although there are no standardized rules for selection of samples in Delphi studies, the general guidelines that have been established during the method's evolution were employed in the sample selection for this study (Adler & Ziglio, 1996; Linstone & Turoff, 1975; von der Gracht, 2008). The explicit criteria applied in selecting experts for Delphi studies varies, depending on the goals and context of the study (Adler & Ziglio, 1996). The criteria applied for sample selection in this study was based on Adler and Ziglio's four general criteria. Specific subcriteria derived from extant research were added to increase the rigor of the sample selection process. Ensuring the relative expertise of panelists is essential in assigning greater validity to the findings over less rigorous survey methods (Clayton, 1997). The additional criteria increased the likelihood that the expert panel produced responses that were more informed than could be expected from an average individual (Adler & Ziglio, 1996).
Table 1

Criteria for panel selection including sub criteria and literature support for inclusion

<table>
<thead>
<tr>
<th>Adler &amp; Ziglio criteria</th>
<th>Specific subcriteria</th>
<th>Literature support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge and practical engagement with issues surrounding the investigation</td>
<td>Domain specific expertise: experience in an education related field</td>
<td>Ross, Shafer &amp; Klein, 2006; Ericsson et al., 2006; Von der Gracht, 2008</td>
</tr>
<tr>
<td>Membership or editorial responsibilities on boards of professional organizations or journals</td>
<td></td>
<td>Pfeiffer, 2003</td>
</tr>
<tr>
<td>Professional recognition by peers or professional organizations (awards, citations, etc.)</td>
<td></td>
<td>Clayton, 1997; Ericsson &amp; Smith, 1991 in Ericsson et al., 2006</td>
</tr>
<tr>
<td>First authors of four (or more) published books or articles in peer reviewed journals between 1985 and 2010 in related field</td>
<td></td>
<td>Hader in von der Gracht, 2008; Pfeiffer, 2003</td>
</tr>
<tr>
<td>Capacity and willingness of experts to contribute to the exploration of the problem</td>
<td></td>
<td>Adler &amp; Ziglio, 1996; Delbecq et al., 1975</td>
</tr>
<tr>
<td>Assurance from experts that they will dedicate sufficient time to the Delphi exercise</td>
<td></td>
<td>Adler &amp; Ziglio, 1996; Delbecq et al., 1975</td>
</tr>
<tr>
<td>Skill in written communication</td>
<td></td>
<td>Adler &amp; Ziglio, 1996</td>
</tr>
</tbody>
</table>

The nomination and selection process applied in the study followed general guidelines derived from the literature (Adler & Ziglio, 1996; Scheele, 1975; von der Gracht, 2008). A list of potential panelists with expertise in gifted education and professional development was developed from a review of the literature. To ensure expertise from the population of school administrators, the nomination list was obtained from a published list of recent award recipients from the National Distinguished Principals program of the National Association of Elementary School Principals and the National Superintendent of the Year Awards program of the American Association of...
School Administrators. The school administration sample was selected to create a panel representing diverse school demographics. Factors considered were urban, suburban, and rural communities, lower and higher socioeconomic schools, elementary and middle schools, and participant gender. Criteria were applied to each potential participant, and 20 potential participants in each subgroup meeting the criteria were invited to participate. One participant in each subgroup who met the criteria was held in reserve, in the event of a low response rate. All of the reserve participants were solicited for participation following the initial deadline of Round One, due to a response rate that was lower than expected.

No uniform standards for determining the size of the panels participating in Delphi studies were evident in the literature. Homogeneous samples should include a group of 10-15 experts according to Skulmoski et al. (2007), and 15-30 according to Clayton (1997). The experts in this study were solicited from the general field of education, but have expertise in different subdomains of education, and so, for the purposes of this study, were considered a heterogeneous group. Clayton (1997) recommended a five- to ten-person panel for individuals with similar expertise on a topic, but coming from different stratifications within a field.

One factor taken into consideration in the decision of sample size was the "decision quality/Delphi manageability trade off" (von der Gracht, 2008, p. 46). A larger group decreases error in decision-making, and may have yielded more consensus and greater reliability (Dalkey & Rourke, 1971; Skumolski et al., 2007); yet, the qualitative orientation of this study had the potential to render a large sample unmanageable (Skumolski et al., 2007; von der Gracht, 2008). The goal of this study was not to reach
consensus, but to elicit responses that developed a shared understanding of the problem and generate as many important contributing factors and desirable/feasible alternative solutions to the problem as possible.

In total, 63 participants were solicited for participation in the study; 21 visited the site to examine the questionnaire, and 12 potential participants chose to complete the Round One questionnaire. One expert left the study after Round One, leaving 11 experts who participated in Rounds One and Two. The total sample of experts \( n = 12 \) included experts from gifted education \( (n = 6) \), professional development \( (n = 3) \), and school administration \( (n = 3) \) from urban, rural, and suburban school communities. This sample size was consistent with recommended sample sizes in the literature (Clayton, 1997).

Letters of Solicitation and Informed Consent

Letters of solicitation (see Appendix A) were sent via email to \( (n = 60) \) potential participants with an explanation of the purposes and design of the study, an estimation of participation time and effort required, background of the researcher, confidentiality and anonymity assurances and procedures, assurance of voluntary nature of participation, and possible benefits of the research (Miles & Huberman, 1994). Six days later, a second e-mail was sent to each prospective participant, with an attachment of the Informed Consent Statement and a link to the Round One questionnaire. The Informed Consent Statement (see Appendix A) included the purpose, duration, and procedures for the study, statements of the voluntary nature of the study, a commitment to preserving confidentiality and degree of anonymity, a discussion of indirect benefits to the participants and contact information for the researcher, mentor, and the Institutional Review Board. To protect anonymity, the first questionnaire item required participants to
Data Collection

In total, three rounds of questionnaires were sent to participants via e-mail communication, with links to accessing the questionnaires through Survey Monkey. Feedback between Rounds One, Two and Three was provided to participants in the form of a matrix, list or table via an e-mail attachment. Participation in the third round was optional for participants. The decision to limit the required participation to two rounds was based on research suggesting that responses are most accurate in Round Two, and therefore it is unlikely that additional rounds will benefit the study (Rowe & Wright, 1999; von der Gracht, 2008). Online survey technology (Survey Monkey®) was used as the mode of interaction and data collection for the study to ensure anonymity for the respondents to others in the group. Anonymity is a key component of Delphi procedures, as it mediates some key issues with traditional group communication processes. The Delphi process serves to limit the influences of bias that occurs in group work, such as deferment of judgment to a respected individual and fear of offering divergent ideas, and reduces the influence of preconceptions of an individual participants’ values and interests (Adler & Ziglio, 1996; Turoff & Hiltz, 1996). Each participant was assigned an identification number attached to the questionnaire link sent in the Round One e-mail. Respondents and data were identified only through this coded number. The settings for the questionnaire administration allowed for the collection of responses by subgroup (gifted, professional development, or school administration).
Round One data collection included Research Questions 1a. to 1d., and 2. The Round One questionnaire was developed by the researcher and administered to the participants in an online format through Survey Monkey. The question items were open-ended to allow for creative responses, but written with consideration of the need to preserve the essential elements of a Delphi process, including anonymity and freedom to choose when to respond (Adler & Ziglio, 1996). The open-ended items for Round One questionnaire were derived from the related literature. A short explanatory text for each group of questions provided parameters and guidance for participants. To address concerns of reliability and internal validity, a jury of experts reviewed the Round One questionnaire items prior to the study (Linstone & Turoff, 1975). Proper balance between clarity and open-endedness in item construction is essential in Delphi studies, as it allows for many emergent and creative ideas, yet establishes parameters so participants remain focused on the issues surrounding the problem (Scheele, 1975).

An e-mail reminder was sent to all potential participants 10 days after the initial distribution of the Round One questionnaire. Potential participants that had been held in reserve were solicited at this time. A second reminder was sent via e-mail after 14 days. Responses from Round One were analyzed and displayed in a matrix of factors by subgroup, along with a list of actions proposed by the entire group. These displays were fed back to participants via e-mail attachment to allow for comments and to inform respondents in preparation for Round Two. The Delphi methodology literature suggests that compelling participants to complete the second round can be positively influenced by short intervals between rounds (Adler & Ziglio, 1996; Landeta, 2005). Round One data
was analyzed and fed back to the respondents with the second questionnaire within one month’s time.

Round Two

Round Two addressed Research Questions 3 and 4. The Round Two questionnaire was developed from the content analysis of responses to the Round One questionnaire. Thematic analysis of Round One data yielded 33 factors that the participants identified as influential in administrators’ decisions related to professional development in gifted education, and 23 proposed actions were solicited from the group. Feedback of the data collected in Round One was delivered via e-mail to the participants, and they were invited to comment on any data they found surprising, interesting, or disagreed with. Additionally, experts were asked to explain if, and how, their thinking had changed due to the feedback from Round One.

In Round Two, the participants were asked to rate the relative importance of each factor and the relative desirability and feasibility of each option for action proposed by the experts in Round One. A set of rating scales, developed by Turoff (1975) was used without modification as the basis for the Round Two questionnaire. Two reminders over two weeks were sent to participants via e-mail, and in two cases, three reminders were sent. Round Two data was analyzed, displayed in a table, and fed back to the participants for commentary. This iterative response-feedback process of the Delphi method serves to validate the findings through the course of the study (Skulmoski, 2007).

Round Three

Round Two data was fed back to the participants via e-mail, with the link to the Round Three questionnaire on Survey Monkey. This round was explicitly identified as
optional. The Round Three questionnaire included only one item: "Please comment on any data from the Round Two feedback table that surprised, disappointed or otherwise interested you. Were there ideas presented that you had not considered before participating? Did your thinking change in any way during your participation in the study?" The comments collected are reported in Chapter IV and discussed in Chapter V.

Data Analysis

Round One

Content analysis of Round One data was conducted using qualitative descriptive coding. An inductive analysis approach was used to analyze open-ended responses, allowing for important ideas and dimensions to emerge from the responses of experts without assuming what those ideas and dimensions might be in advance (Patton, 2002)—an important consideration in maintaining the validity of the Delphi method (Adler & Ziglio, 1996; Linstone & Turoff, 1975). Thematic content analysis included identification of common themes emerging from responses of the group as a whole, and patterns in whole group and subgroup responses. Open coding of themes and patterns was used to maintain "openness" to emerging ideas (Patton, 2002). To facilitate the cross factor analysis, responses were recorded in a role-by-question matrix and color-coded to reveal the factor categories included in each response. Responses were coded by factor category, including combinations of factors, and displayed in a frequency table to organize the incidence of response crossover.

Based on these analyses, a summary of factors identified by the participants as a whole was created, and was used to develop the importance rating scale for the Round Two questionnaire items. Options for actions that the experts proposed in Round One
were analyzed and used to develop the desirability and feasibility scales used in the questionnaire for Round Two. The data was displayed in a matrix for factors and list for actions. The matrix and list was fed back to participants in Round Two.

Round Two

Round Two items required participants to rate the importance of the factors identified in the first round, and to rate the desirability and feasibility of options for action that emerged from the Round One data. Unmodified rating scales developed by Turoff (1975) provided the framework for the questionnaire in Round Two. Descriptive statistical procedures were applied to analyze the data through computer assisted tools available through the Survey Monkey® software. Group rating data collected from the rating scales was organized in a frequency distribution of responses table, and displayed as percentages and number of responses for each rating point to answer Research Question 3. A comparative analysis of responses based on subgroup membership was completed to answer Research Question 4.

Round Three

All Round Two data were displayed in a table and fed back to the participants for revisions or commentary. Comments were minimal and placed in context with the other data collected in the study in Chapters IV and V.

Threats to Validity

Threats to External Validity

The purposive sampling procedures utilized in this study raise population validity concerns. Although an attempt was made to minimize this threat by setting rigorous criteria for inclusion in the sample, not all targeted “experts” agreed to participate, and it
is possible that the accessible sample was not representative of the target sample. This threat was somewhat reduced by instructing experts to answer the questions in which they have confidence in their contributions, and building in a "no judgment" option in the questionnaires should experts feel they lacked sufficient knowledge to rate the items. Although this design element relied on a self-assessment of expertise, it served to provide some measure of validity (Rowe & Wright, 1999).

The size of the sample was relatively small, threatening external validity. Patton (2002) suggested that the credibility of a small purposive sample should be judged on the purpose and rationale for the study. The necessity in a Delphi study to analyze the data promptly for efficient feedback in the iterative rounds requires a sample small enough to manage, but large enough to be meaningful. This sample size met the recommendations found in the literature (Clayton, 1997).

Foundational to the study is the solicitation of expert knowledge to lend credibility to the results. The establishment of rigorous criteria for expertise addresses this validity concern to some degree by ensuring the expertise of respondents. However, it is possible that experts who chose not to participate in this study, or were not solicited for participation, would have influenced the findings differently.

The selection of experts for the sample may raise concerns about the threat that the specificity of variables will have on external validity. The uniqueness of experts, by definition, will most certainly influence the credibility and trustworthiness of the study. An attempt to mitigate these concerns was made through selection of experts based on a rigorous set of criteria based in extant literature to ensure a knowledgeable panel capable of making informed judgments regarding the research questions. Care was taken to place
conclusions in context with the purposes and methodology of the study.

Due to the nature of the problem and the Delphi methodology, the ability to generalize the findings across time and context is questionable. Concerns related to temporal validity are obvious, since the study is dependent upon political, social, educational and economic influences that are conditional on time. This concern required that any conclusions drawn were qualified and placed in context with the extant research.

Finally, researcher bias threatened the external validity of the study. Although every attempt was made to ensure unbiased interpretation of qualitative data, the researcher holds values related to the problem that may have interfered with objectivity in interpreting data. The feedback-response communication process inherent in a Delphi study might have mitigated this bias, since the participants had the opportunity to clear up misinterpretations in subsequent rounds.

**Threats to Internal Validity**

It is possible that history threats to the internal validity of the study might have developed during the course of the study. Although major new legislation or policy decisions related to gifted education professional development did not occur during the study period, it is not possible to know with certainty if political or social events influenced participants' perspectives.

Attrition may have produced a threat to internal validity. In response to this threat, an attempt was made to limit the time between rounds to compel participants to continue participation (Landeta, 2005). Every attempt was made to appeal to factors that motivate respondents to maintain a commitment to all rounds of the study. The letters of solicitation included explanations that attempted to create a tension for change, establish
the desire for a group process to solve the problem, and suggest that participation would enhance professional knowledge (Adler & Ziglio, 1996). Of the 12 expert participants, all except one expert chose to complete Rounds One and Two. One participant completed all three rounds. The final sample size was consistent with the literature recommendations for appropriate sample sizes for Delphi studies of this nature.

It is possible that the Round One questions did not elicit responses that encompassed all of the possible issues related to the problem. This threat was minimized by conducting a question review with a jury of experts prior to distribution of the Round One questionnaire. Researcher bias was possible during interpretation of data, and in the selection of data fed back to participants. To reduce this threat, “knowledgeable others” reviewed the analysis before feeding back information to the participants. Additionally, the purposeful composition of the sample to include experts outside of the gifted education domain provided perspectives without implied bias toward gifted education.
CHAPTER IV
RESULTS OF THE STUDY

Overview

Chapter IV presents the results of the Delphi study. The purpose of the study was to solicit the informed professional judgment of experts in the fields of school administration, professional development and gifted education, to identify factors that might contribute to the decisions made by school administrators regarding the professional learning of general education teachers related to gifted education. The research was designed to solicit from the experts, alternatives for future actions that might be used to mitigate the negative factors that influence school administrators’ decisions about professional learning in the area of gifted education for general education teaching staff. The analysis of the data that resulted from three rounds of questionnaire administration was designed to identify the factors and actions proposed by the experts, and to determine the relative importance placed on the factors, and the relative desirability and feasibility of the actions as perceived by the experts. Subgroup analysis was used to expose any differences in thinking between these subgroups of experts. This analysis contributed to a deeper understanding of underlying issues that may be perpetuating the problem.

The results of the study are presented and organized by Delphi rounds. Round One results address Research Questions 1 and 2. The factors identified by the experts address Question 1 and are reported by factor category: educational, political, economic, and social factors. A cross-factor analysis reports the relationship between the factors
that emerged from the responses. To address Research Question 2, the proposed actions are reported by factor category.

Round Two data are reported to answer Research Questions 3 and 4. An analysis of the group data is followed by the analysis of subgroup data. Tables and figures are included where appropriate to add clarity of understanding for the reader. Round Three data are reported as a narrative.

**Descriptive Characteristics of the Experts**

The national sample in this study included experts who were distinguished in their respective fields. The six gifted education experts authored, on average, 122 articles in refereed journals, nine book chapters, seven books, and hold, or held, numerous positions on executive boards of national organizations. The gifted education experts hold, or held, positions on the faculties of universities, and a number of the experts won numerous awards in their field. The three professional development experts authored, on average, six books, and hold, or held, positions on the boards of national organizations in their field. The three school administration experts have been designated as National Distinguished Principals, awarded by the National Association of Elementary Principals. The school administration experts are from suburban, rural and urban schools. Men and women were represented in all expert subgroups.

**Round One**

The Round One questionnaire items required the expert participants to identify the political, educational, economic and social factors that might influence school administrators’ decisions related to the professional learning of general education teachers in gifted education. In addition to identifying factors that influence
administrators' decisions, Round One elicited proposed actions that school administrators or gifted education advocates can take within the next ten years to mitigate the perceived negative factors identified in this study. This section is organized by factor category to address each research question. For each factor category, the within-subgroup findings are reported, including the factors that relate to both quantity and quality of professional learning, followed by a comparison between subgroups. During content analysis, the responses to the open-ended items revealed overlap between the factor categories of political, educational, economic and social factors. The nature and extent of overlap in these responses are reported in a cross-factor analysis. For Research Question 2, the actions proposed by the experts are reported by factor category, followed by a summary of expert comments collected from the feedback of Round One data.

**Educational Factors**

The experts identified educational factors that might influence school administrators' decisions regarding professional learning for general education teachers in the area of gifted education (see Table 2). Educational factors suggested by the experts included school structure, policy, and practice-based factors.

**Educational factors within subgroups.** The factors identified by the experts were in response to two questionnaire items: “What educational factors influence school administrators' decisions regarding the quantity of professional learning for elementary and middle school general education teachers related to gifted education? Please explain your response”; and “What educational factors influence school administrators’ decisions regarding the quality of professional learning for elementary and middle school general education teachers related to gifted education? Please explain your response.”
### Table 2

**Educational Factors that Influence School Administrators’ Decisions**

<table>
<thead>
<tr>
<th>Educational Factors</th>
<th>Gifted Education Experts</th>
<th>Professional Development Experts</th>
<th>Gifted Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCLB “discourages” administrators from “worrying” about gifted students</td>
<td>NCLB places professional learning focus on the “lower two quartiles”</td>
<td>“Pressures from competing curricula within the limits of the school day.” Required policies are implemented</td>
<td></td>
</tr>
<tr>
<td>Contradictory priorities</td>
<td>Competitive initiatives</td>
<td>System priorities</td>
<td></td>
</tr>
<tr>
<td>In schools with low-average achievement, need for pd in gifted may not be recognized with the prevailing focus on proficiency</td>
<td>“If a school has a preponderance of high achieving learners, there is also more of a likelihood that multiple PDs will be provided to teachers.”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attention to teachers’ needs for “curricular and instructional data based practice information”</td>
<td>Administrators’ level of commitment to quality teaching focused on student learning</td>
<td>Methods of identification</td>
<td></td>
</tr>
<tr>
<td>Lack of time</td>
<td>Time allocation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accepting that the gifted specialist has the “sole responsibility” for gifted students’ program -may not recognize a need for pd for general education teachers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal preparation programs do not address gifted learners. “Most school administrators do not have experience or training in gifted education and do not see the need for providing professional development”</td>
<td>District commitment to professional learning of administrators related to teachers’ professional development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrators do not have experience or adequate knowledge of gifted education to evaluate the quality of professional learning in gifted education</td>
<td>“Administrators’ evaluations tied to the quality of professional learning in their schools”</td>
<td>Perception that professional learning means “bringing someone from outside of to present” Adequate staffing for successful PD</td>
<td></td>
</tr>
<tr>
<td>Much professional development is narrowly focused on “pieces of a program or a curriculum, not an emphasis on the vision for these learners in our schools...reducing the quality of training”</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Gifted Standards**: “…programming standards published and disseminated by NAGC will help to determine the quality of PD.”

**Note**: Representative quotes were used where appropriate.
Gifted education experts. Many of the gifted education experts commented on the influence that administrators' lack of training and experience in gifted education might have on both the quantity and quality of professional learning they provide or promote. Without the background knowledge to understand the needs of gifted students, school administrators might not recognize the need for professional development in gifted education for general education teachers, according to the gifted education experts. Administrators' lack of knowledge related to gifted education might influence their ability to evaluate and design quality professional learning experiences. As one gifted education expert stated, “I doubt that many school administrators could discriminate between good quality and poor quality professional learning for general education teachers related to gifted education. An administrator would have to know something about the field first in order to determine whether the knowledge and skills being provided were of good or poor quality.” One gifted education expert commented on her experience with the lack of attention to gifted education in educational leadership programs at her affiliated university.

The gifted education experts suggested that the quantity and quality of professional learning in gifted education is limited by a narrow focus. One gifted education expert commented that, when professional development in gifted education is offered, it is often focused on “pieces of a program or a curriculum, not an emphasis on the vision for these learners in our schools.” One gifted education expert suggested that trained teacher cadres might influence the quantity of professional learning, but the development of high quality professional learning experiences by “researchers and forward thinkers” are needed to influence the quality of professional learning. This was
echoed by another gifted education expert, who suggested that the scale of professional development, specifically the follow-up classroom coaching required to successfully implement innovative approaches, was a factor that might influence school administrators' decisions. This factor is difficult to separate from time constraints and economic factors that would likely influence the ability of administrators to provide such professional learning.

The gifted education experts identified two factors related specifically to administrators' decisions about the quantity of professional learning. One gifted expert suggested that, when administrators accept the belief that a "single gifted specialist is solely responsible for the educational program for high ability learners", there may be little perceived need to facilitate professional learning for general education teachers in gifted education. Gifted education experts also suggested that high-performing schools with high-achieving students might offer multiple professional development opportunities to teachers, compared to schools with "low average achievement" where administrators "may not see the need for professional development in gifted education" even though instructional adaptations would benefit advanced learners in these low-performing schools.

**Professional development experts.** The professional development experts identified competing initiatives, school system priorities, time allocation and adequate staffing as factors that influence administrators' decisions regarding both the quantity and quality of professional learning. One professional development expert indicated that district support for "administrators learning about professional learning" and "administrators' evaluations tied to the quality of professional learning" could influence
administrators' decisions about both the quantity and quality of professional learning. The professional development experts suggested that administrators' decisions about the quality of professional learning are influenced by "the perception that professional learning means bringing someone from the outside of the organization to present."

School administration experts. The school administration experts identified three factors that influence administrators' decisions about both the quantity and quality of professional learning in gifted education. The experts suggested that the accountability measures of NCLB place school administrators' focus on students in the "lower two quartiles." This factor might limit the focus of professional learning to those that address the needs of nonproficient students. One school administration expert commented that, "required policies are implemented," illustrating the influence of requirements or mandates on school administrators' decisions. What is required might set priorities for professional learning. One school administrator commented that "pressures from competing curricula within the limits of the school day" influence administrators' decisions related to professional learning in gifted education. Finally, a school administration expert suggested that methods of identification influence the quality and quantity of professional development, perhaps suggesting that identification methods impact the numbers of identified gifted students and ultimately influence professional development decisions.

Educational factor comparison between subgroups. A comparison of responses across subgroups revealed patterns in subgroup responses. The gifted education experts' responses were very specific to gifted education, the professional development experts' responses focused on professional learning more generally, and the
school administration experts' responses suggested practical day-to-day considerations. The responses of gifted education experts focused primarily on the preparation and professional knowledge of administrators related to gifted education, the lack of collective responsibility for gifted education in a district, and the narrow focus in gifted education professional development experiences. The responses of the professional development experts were primarily focused on district support for professional learning, and the factors related to the quality of professional learning. In comparison to the other groups, the school administration experts' responses focused on the influence of mandates or requirements, and reflected practical concerns that can be associated with administrators' daily practice.

Recognition of the influence that local priorities have on the professional development decisions related to quality and quantity was common across subgroups. Furthermore, all subgroups commented on the influence of "contradictory initiatives" or "competing curricula" on professional development decisions, and the expert subgroups linked this factor to federal mandates and/or state/local policy or requirements. It is notable that the gifted education and professional development experts identified administrators' knowledge as a factor, yet school administrators made no comments related to administrative knowledge, preparation or learning.

**Political Factors**

The experts identified several political factors that influence school administrators' decisions regarding professional learning, and are related to both the quality and quantity of professional learning provided to general education teachers (see Table 3). Among the factors identified were the influence of federal, state and local
mandates and policies, community pressures, accountability measures, and the influence of professional organizations.

Political factors within subgroups. The factors identified by the experts were in response to two questionnaire items: "What political factors influence school administrators' decisions regarding the quantity of professional learning for elementary and middle school general education teachers related to gifted education? Please explain your response"; and "What political factors influence school administrators' decisions regarding the quality of professional learning for elementary and middle school general education teachers related to gifted education? Please explain your response."

Gifted education experts. The gifted education experts suggested that the federal mandates of NCLB focus administrators' priorities on the needs of struggling students. With accountability measures focused on minimal proficiency, administrators might prioritize professional learning addressing the needs of nonproficient students. This frustration is illustrated by the comments of one gifted education expert: "Should the federal and local governments truly be concerned with measuring the growth of all children in all subject areas then professional development may be positively affected."

Along with the influence of federal mandates and proficiency focus, the gifted education experts suggested that state mandates and policies also dictate what type of professional development is required and delivered. The experts suggested that the lack of state and local policies that require professional development in gifted education for the licensure or (re)certification of teachers influences the decisions administrators make regarding the quantity of professional development offered to general education teachers.
<table>
<thead>
<tr>
<th><strong>Gifted Education Experts</strong></th>
<th><strong>Professional Development Experts</strong></th>
<th><strong>School Administration Experts</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal mandates of NCLB / AYP pressures administrators to focus on struggling students &quot;administrators will focus on what they are held accountable for&quot;</td>
<td>NCLB accountability determines required pd</td>
<td>Federal mandates and AYP</td>
</tr>
<tr>
<td>Special education mandates require vast attention</td>
<td></td>
<td>&quot;Currently gifted education does not enjoy the status and support that special education receives.&quot;</td>
</tr>
<tr>
<td>Accountability and monitoring by states of professional development related to gifted education</td>
<td>State and district policies establishing requirements for pd and/or certification and licensure</td>
<td>State mandates</td>
</tr>
<tr>
<td>Rare state mandates and regulations requiring gifted education professional development – disparate state regulations leave decisions to local districts</td>
<td>State and local professional learning standards provide &quot;designated expectations for quality&quot;</td>
<td></td>
</tr>
</tbody>
</table>
| Standards—"While national standards exist, school districts attend to state standards primarily, if that."
"Access of administrators to the programming standards published and disseminated by NAGC will help to determine the quality" | Standardized assessments do not measure growth of all students in all subjects | |
| Influence of organizations on administrators’ professional learning
"ASCD exerts far too much influence pushing its own authors" | Community pressure to focus on other topics community attitudes towards educational spending in general | Community priorities |
| Parental pressure drives local PD efforts Parental support for quality teaching and student achievement | Parental pressures "high income schools have greater pressure in this area from parents than low income schools" | |

**Note.** Representative quotes were used where appropriate.
States have disparate requirements in professional learning in gifted education, and as one gifted education expert stated, “Rarely is professional development for general education teachers related to gifted education required by states or districts, so they do not choose to supply it.” State monitoring of professional learning may also influence administrators’ decisions. Gifted education experts suggested that, when professional development in gifted education is monitored by the state, local school administrators are held accountable for the quality of professional learning in gifted education. As one gifted education expert stated, “administrators will focus on what they are held accountable for.”

The gifted experts indicated that the community, the school board, and parents exert influence over administrators’ decisions related to the quantity of professional development in gifted education for general education teachers. One gifted education expert commented, “The only professional development is usually local and driven by parental pressure.” Gifted education experts suggested that administrators’ decisions related to the quality of professional learning experiences in gifted education are influenced by community and parental pressures. The experts suggested that these external pressures might be driven by the value these groups place on gifted education, teachers in general, and the professional learning of teachers.

One gifted expert suggested that quality of professional learning could be influenced by access for school administrators to the professional learning standards in gifted education published by National Association for Gifted Children (NAGC). One gifted education expert raised concerns about the influence of professional organizations, stating, “ASCD exerts far too much influence pushing its’ own authors.” This response
suggests that the narrow focus of professional organizations that are influential with school administrators might accordingly influence the quality of professional development in gifted education for general education teachers.

**Professional development experts.** The professional development experts suggested that federal mandates determine the professional learning that is required, influencing administrators’ decisions. The experts also commented on the influence of state mandates and requirements for professional learning and (re)certification. These requirements might influence administrators’ decisions about the amount of professional learning provided to teachers. In regard to quality of professional learning, the experts suggested that the adoption of state and local standards for professional learning could provide “designated expectations for quality.” At the local level, the professional development experts suggested that parental support for quality teaching influences the quality of professional learning that is designed for teachers.

**School administration experts.** The school administration experts identified the federal mandates of NCLB as a factor that influences administrators’ decisions. The focus on nonproficient students may limit the professional learning experiences in gifted education provided by administrators. One school administration expert commented that “NCLB legislation puts greater focus on the lower two quartiles academically.” The opportunity for teachers to have access to professional learning experiences in gifted education may be limited by state or local requirements, as illustrated in the comments of one school administration expert who suggested that he/she provided “just those [professional learning experiences] mandated.” The lack of state mandates and accountability for gifted education in general can influence the quality of professional
development in gifted education provided for teachers. As one school administrator stated, "Currently, gifted education does not enjoy the status and support that special education receives."

The school administration experts suggested there might be a link between the socioeconomic status and the pressure placed on administrators from the community for professional learning in gifted education. One school administration expert suggested that parents in high-income schools exert more pressure for professional learning in gifted education than parents in low-income schools. The school administration experts mentioned the influence of the "desires and directions of the local school board", and the influence of parental involvement in the schools as influential factors.

Political factor comparison between subgroups. A comparison of the responses between subgroups exposed few differences in subgroup approach to identifying the political factors. Within the political factor category, all subgroups of gifted education, professional development, and school administration experts indicated that federal mandates, as well as state and local policies regarding requirements for professional development, influenced the quantity and quality of professional development in gifted education. Although all experts indicated that federal mandates or state requirements influence administrators' professional development decisions, gifted education experts stood alone in raising the possibility that monitoring of professional learning might influence administrators' decisions.

Professional learning standards were mentioned frequently by gifted education and professional development experts as possible factors that influence the quality of professional development in gifted education. School administrators did not mention
professional learning standards at all. Furthermore, policies related to requirements for professional learning in gifted education for licensure or certification of administrators and teachers were identified as influential factors by gifted education and professional development experts, but any suggestion of preparation or professional development requirements was absent from school administration experts’ responses.

Economic Factors

The experts identified economic factors that influence school administrators’ decisions regarding professional learning for general education teachers related to gifted education (see Table 4). Economic factors identified by the experts included diminishing resources, designated funding, disparate state funding of gifted education, and conflicting budget priorities.

Economic factors within subgroups. The factors identified by the experts were in response to the questionnaire items, “What economic factors influence school administrators’ decisions regarding the quantity of professional learning for elementary and middle school general education teachers related to gifted education? Please explain your response”; and “What economic factors influence school administrators’ decisions regarding the quality of professional learning for elementary and middle school general education teachers related to gifted education? Please explain your response.”

Gifted education experts. The gifted education experts suggested that the lack of federal funding and disparate state funding influence the quantity of professional learning in gifted education. As one gifted education expert pointed out, there are wide disparities in state funding, with some states providing no funding for gifted education for any purpose, including professional development in gifted education.
Table 4

**Economic Factors that Influence School Administrators' Decisions**

<table>
<thead>
<tr>
<th>Gifted Education Experts</th>
<th>Professional Development Experts</th>
<th>School Administration Experts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of federal funding</td>
<td>Federal funding is absent</td>
<td></td>
</tr>
<tr>
<td>NCLB drives economic priorities - focus on “critical” priorities of struggling learners’ needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not all states provide funding for gifted education</td>
<td>Designed funding for professional learning at federal, state and local levels.</td>
<td>Dedicated funding for professional learning for gifted education</td>
</tr>
<tr>
<td>Cost and time to provide meaningful job embedded, sustained pd for innovative approaches</td>
<td>Cost of instructional coaching, mentoring, Time allocation</td>
<td></td>
</tr>
<tr>
<td>Current economic crisis reduces available resources and funding, so administrators spend money only on required professional development</td>
<td></td>
<td>District budget priorities</td>
</tr>
<tr>
<td>Economic crisis creates pressure to keep all teachers in classrooms all the time, limiting time for professional development</td>
<td></td>
<td>“Not much extra funding is available for added professional development beyond the 24 mandated hours of all teachers</td>
</tr>
<tr>
<td>Most admin will provide least-expensive PD option when money is scarce “No money, no quality.”</td>
<td></td>
<td>Funding for adequate staffing to support professional learning</td>
</tr>
</tbody>
</table>

*Note.* Representative quotes were used where appropriate.
The gifted education experts raised concerns that the current economic crisis is making the situation worse. “When economic times are hard, administrators will spend money only on required professional development”; and as another gifted education expert stated, “when budgets are being cut, as they are now, the quantity of professional learning for teachers suffers and only the most ‘critical’ and state mandated training efforts will be implemented.” Another gifted education expert echoed this concern by commenting that, due to the accountability measures of NCLB, administrators are not motivated to “spend money on any but struggling learners’ needs.”

One expert raised concerns that limited resources and diminished funds might pressure administrators to “keep all teachers in classrooms all the time”, influencing the quantity and quality of professional learning by limiting noninstructional time for teachers that might otherwise be available for professional learning. The gifted education experts also suggested that, when there is stronger community support for education spending in general, there might be more support for professional learning.

The gifted education experts identified factors that influence quality of professional learning. One gifted education expert suggested that, when administrators are faced with budget constraints, they “take the cheapest option they can,” influencing the quality of professional learning. Furthermore, the cost of providing the ongoing professional learning required to effectively implement new approaches to classroom instruction for gifted students might influence the quality of professional learning administrators provide. Finally, the gifted education experts suggested that a lack of quality professional learning materials related to gifted education might negatively influence the decisions made by administrators related to professional learning in gifted
education. One expert stated, “No money, no quality. Trained teacher cadres can help with quantity issues, but one needs researchers and forward thinkers to create quality professional learning experiences” in gifted education.

**Professional development experts.** The professional development experts suggested that designated state and local funding for professional learning, designated staffing, and budget cuts that force administrators to prioritize professional learning needs are economic factors that influence the quantity and quality of professional learning. The professional development experts suggested that designated local funding is needed for professional learning, and to insure adequate staffing to provide the professional development experiences. The experts suggested that this funding for staffing could make it easier for school administrators to provide professional development opportunities to teachers. The professional development experts expressed concern that negative economic factors might undermine a local school district’s ability to provide research-supported professional learning, such as mentoring and coaching.

**School administration experts.** When budgets are cut, administrators’ decisions are influenced by the need to fund professional learning that is state mandated or perceived as most critical for the district. This concern was articulated by one school administration expert who stated, “Not much extra funding is available for added professional development beyond the 24 mandated hours of all teachers.” Note the words “extra” and “added” in this statement, suggesting that perhaps this school administration expert views professional development for gifted education as supplemental to those required.
Attitudes toward education spending might influence administrators’ decisions. In high-income districts, as one school administration expert suggests, there will be more parental pressure to provide professional learning in gifted education. Designated funding for professional learning in gifted education might influence administrators’ decisions along with state, district, and building allocations, according to the school administration experts.

**Economic factor comparison between subgroups.** The comparison of responses across subgroups revealed some differences in perspectives. The gifted experts’ comments reflected the view that administrators essentially “hold the purse strings”, and make decisions to fund only those professional learning experiences required. The school administration experts’ comments imply that they are subject to others’ decisions through budget and building allocations. The comments of school administration experts, indicating that designated funding for gifted education professional development was influential, might suggest that they may not have as much control over spending decisions as others suspect they do.

All subgroups commented that designated federal, state and local funding for professional learning in gifted education influences school administrators’ decisions related to quantity and quality. The school administrators’ responses focused on the availability of funding for professional learning as the primary factor in both quality and quantity. The gifted education and professional development experts extended the thinking in the area of quality to include specific comments related to professional learning experiences that are generally considered effective practices such as classroom follow-ups, coaching, and mentoring.
Social Factors

The experts identified social factors that influence the professional development decisions made by school administrators related to gifted education (see Table 5). These factors include; values and attitudes held by the community, parents, teachers, and administrators, acceptance of assumptions that are based on misunderstandings of the needs of gifted students, and the influence of political and social forces that promote the value of focusing educational efforts on specific student groups.

Social factors within subgroups. The factors identified by the experts were in response to the questionnaire items: “What social factors influence school administrators’ decisions regarding the quantity of professional learning for elementary and middle school general education teachers related to gifted education? Please explain your response”; and “What social factors influence school administrators’ decisions regarding the quantity of professional learning for elementary and middle school general education teachers related to gifted education? Please explain your response.”

Gifted education experts. Gifted education is not federally mandated, and rarely state mandated, leaving decisions related to gifted education programming and professional learning to local school administrators. As one gifted education expert pointed out, “with site-based decision making and no state or local mandates,” administrators are often sole decision-makers related to gifted education. The possibility exists that federal and state mandates and accountability measures encourage school administrators to place a higher value on special education, and might also foster the devaluation of gifted education in schools. One gifted education expert stated, “The
gifted emphasis in schools has never been popular, but hostile environments are growing due to administrative neglect and lack of valuing”.

Teachers may influence administrators’ decisions regarding the amount of professional learning provided, according to one gifted education expert who commented, “How teachers in a school ‘feel’ about gifted learners and how important they think it is to see these children succeed has a lot to do with what an administrator will provide in professional learning,” and went on to say that, when “teachers are enthusiastic about wanting to learn more about how to work with gifted learners, there is a better chance that given names by these teachers, administrators will allow training to occur”.

Parents may play a role in the amount of professional learning provided and the value placed on gifted education according to the experts. The influence of parents may not always be perceived as a positive force. As one gifted expert commented, “There is some evidence that school administrators view services for advanced learners as an annoying necessity to respond to parents they view as “pushy”. Under such conditions, administrators are likely to provide minimal professional development in order to be able to report they have responded to community desires.” Parents may cause administrators to develop, or retain, negative attitudes toward gifted education, influencing their decisions related to the quantity of professional learning in gifted education.

One factor the gifted education experts identified as unique to quality was the issue of equity raised by a gifted education expert who commented, “Misunderstandings of equity, believing keeping all children in the same classroom is the right thing to do,” might influence administrators’ decisions related to the quality of professional learning. If administrators have limited knowledge of the academic needs of gifted students, their
decisions might be based on values that have little to do with the needs of gifted learners. One gifted education expert expressed frustration with the general disregard for professional learning in gifted education and commented, “Quality in an undervalued area of professional development would not be much of an issue.”

**Professional development experts.** The professional development experts suggested that the general learning culture of a school or district influence administrators' decisions. One professional development expert stated, “When there is a culture to support learning, there will be a stronger commitment to learning” in the school. Schools that support learning are distinguished by a “culture of accountability, collective responsibility, collaboration and experimentation,” according to these experts. One professional development expert introduced the idea that larger societal values might influence administrators’ decisions. This expert commented, “The value society places on developing the full potential of all students might affect administrators' views regarding both quantity and quality of professional learning.” This response, along with other experts' comments, raise the question of whether current accountability measures are influencing the value placed on gifted education in schools. Professional development experts rarely made their responses specific to gifted education, but one professional development expert commented that the “assumption that gifted students will be successful anyway” influences administrators. Finally, parental support for quality teaching may influence the quantity and quality of professional learning according to one professional development expert.
### Table 5

#### Social Factors that Influence School Administrators' Decisions.

<table>
<thead>
<tr>
<th>Gifted Education Experts</th>
<th>Professional Development Experts</th>
<th>School Administration Experts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cultural values that support learning including: collective responsibility, collaboration, and experimentation</strong></td>
<td><strong>Cultural values that support learning including: collective responsibility, collaboration, and experimentation</strong></td>
<td><strong>Teacher perceptions</strong></td>
</tr>
<tr>
<td>Negative reaction to gifted education by teachers and others. “Hostile environments are growing due to administrative neglect and lack of valuing.”</td>
<td><strong>The value society places on developing the full potential of all students may affect administrators’ views regarding both quantity and quality of professional learning.”</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Gifted education is often not valued in schools</strong> “Quality in an undervalued area of pd would not be much of an issue.”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community attitudes toward professional learning in gifted education</td>
<td>Community attitude toward teachers in general</td>
<td>System priorities</td>
</tr>
<tr>
<td>Community attitudes toward giftedness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Without background in gifted education, administrators “may adhere to certain myths regarding gifted ed (e.g. elitism, gifted can make it on their own, etc.)…”</td>
<td>Assumption that gifted students will be successful</td>
<td>Computing priorities “Gifted education can be seen as “extra” and does not get addressed until other, perceived to be more pressing needs”</td>
</tr>
<tr>
<td>“Misunderstandings of equity – believing keeping all children in the same classroom is the right thing to do” Administrators may “hold anti-ability grouping sentiments”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“…some evidence that administrators view services for advanced learners as an annoying necessity” in response to “parents they view as pushy” leading to minimal professional development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowing a family with a gifted child</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Advocacy efforts that connect student achievement to global competitiveness</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note.** Representative quotes were used where appropriate.
School administration experts. The school administration experts identified fewer factors in this category than others. They identified school culture as a social factor that influences administrators’ decisions, along with the value placed on gifted education professional development. One school administration expert commented, “Gifted education can be seen as “extra” and does not get addressed until other, perceived to be more pressing needs.” These “pressing needs” may be mandates for struggling students and special education, as illustrated by the following comment by the same school administration expert, “Currently, gifted education does not enjoy the status and support that special education receives.” School administrators might be compelled to place a high value on special education, simply because they are accountable for federal and state mandates for special education.

Social factor comparison between subgroups. There were differences in the perceptions of the social factors that influence administrators’ decisions that were based on the roles of the experts. Professional development experts approached the social factors as more global and societal than the other two groups. This may reflect a perspective from their role as general professional development experts with international and national experience. The school administration experts demonstrated a decidedly political perspective in their responses, connecting social factors most often to the influence of mandates and requirements. In comparison, the gifted education experts commented more frequently on the influence of teachers’ and administrators’ knowledge and attitudes toward gifted education and students on professional learning decisions.
Cross-Factor Analysis

Many of the responses given by the experts included the identification of factors that fell within other factor categories. Crossover of factor categories within responses was apparent in all categories: political, educational, economic, and social factors (see Figure 2). At times, the experts commented that it was difficult to separate the factors in their responses, and many drew connections between factors in their responses. Some experts repeated answers in different factor categories.

Educational factors were linked with economic factors by gifted education and professional development experts most often. The experts linked funding to staffing and time allocation; specifically, the cost that would be incurred when providing the high-quality sustained professional development necessary to implement new approaches. School administration experts did not link these two areas in any responses given, and tended to link educational factors with political and social factors in their responses. School administration experts suggested that the accountability measures associated with NCLB legislation pressured them to put greater focus on struggling learners, a factor that contributed to the pressures of setting priorities in the context of “competing curricula.”

The social factors of school culture and teacher perception were connected to educational factors by the school administration experts who included responses that linked teacher perceptions to decisions related to the quality of professional development for general education teachers. Social factors were linked most often to political factors by gifted education and professional development experts. These responses centered on the lack of value placed on gifted education, due to possible misunderstanding or ignorance of the needs of gifted students.
Gifted education and professional development experts suggested that professional learning standards in gifted education, and/or professional learning requirements in gifted education for licensure of teachers and administrators, might have influence on the value placed on gifted education by administrators. The school administration experts did not connect these two factors.

The school administration and gifted education experts linked political and economic factors in ways that professional development experts did not. School administration experts suggested that mandated professional development is funded, leaving little money for "extra" professional development. The gifted experts expressed this concern as well, suggesting that professional learning in gifted education is ignored in favor of funding for state mandated training that is perceived as more critical, and funding is not provided for any but struggling learners' needs.

The high incidence of crossover between factor categories suggests that the factors that influence school administrators' decisions regarding professional learning for general education teachers are complex and interrelated. Furthermore, the patterns in factor relationships that emerged through analysis suggest that, aside from the link
between political and educational factors, differences emerged in the connections made between factors based on the role or perspective of the experts.

Proposed Actions

The experts proposed actions that might be taken in the next ten years to mitigate the negative factors that influence school administrators' decisions regarding professional learning for general education teachers related to gifted education. Actions to address negative political, educational, economic and social factors were proposed by the experts and are reported by subgroup. A comparison of subgroup open-ended responses was not done, since the Round Two ratings reported later in this chapter provided all of the subgroup comparison necessary.

Proposed actions to mitigate educational factors. The actions proposed by the experts to mitigate the negative educational factors were in response to the questionnaire item, "What actions could be taken within the next ten years that might mitigate the negative educational factors and positively influence school administrators' decisions regarding the professional learning of elementary and middle school general education teachers related to gifted education?"

Gifted education experts. Gifted education experts' responses focused primarily on actions that could increase the knowledge of administrators and teachers regarding the learning needs of gifted students and options for gifted education services and programs. The experts suggested that the establishment of requirements for coursework in gifted education for school administrators could positively influence administrators' professional learning decisions. Coursework for administrators that is focused on helping administrators understand the needs of gifted learners, appropriate identification
procedures, and gifted education practices could “help improve curriculum and instruction for all learners”, according to the experts. In addition, one gifted education expert suggested that gifted education knowledge be included in the principal licensure exam.

In addition to coursework in gifted education for administrators, gifted education experts proposed changes in teacher preparation requirements. One gifted education expert suggested that local districts could set priorities for administrators to “expect some preparation in gifted education from general education new hires.” One gifted education expert commented on the need for this action due to the current status of preservice education, stating, “At present, there just isn’t enough going on in teacher education to make this even a blip on preservice teachers’ radar in most states.” In addition to coursework, the experts proposed the establishment of state and local standards for gifted education to define teacher competencies before and after licensure.

A gifted education expert proposed the application of a “strategic planning model that maps needs and priorities for gifted education, in the same way other educational issues are handled,” as a possible action. This action could facilitate purposeful planning for long-term professional learning. The experts suggested that increased efforts to disseminate research evidence that connects professional development in gifted education to improved instruction for all learners might go a long way in encouraging school administrators to provide such professional development.

Professional development experts. The professional development experts proposed actions to promote and foster planning for sustained professional learning efforts. Long-term planning for professional development, along with succession
planning, was suggested by a professional development expert to insure continuity when changes in school administration occur. The experts suggested that research to support professional development initiatives would be beneficial. Engaging teachers in professional development decisions and reducing one-size-fits-all professional development was also suggested by the professional development experts.

**School administration experts.** The school administration experts suggested that providing opportunities for schools to address the needs of all students at the same time could mitigate some of the issues that the influence of requirements and mandates have on setting priorities for professional learning. In addition, the school administration experts suggested that setting goals for professional development in gifted education for general education teachers at the federal, state and local levels might mitigate some of the educational factors, and increase support for gifted education services and professional development.

**Actions to mitigate educational factors.** The actions proposed to mitigate the educational factors identified by the experts include:

- Changes in administrative preparation programs and licensure exams to include gifted education topics
- Promote administrators’ expectation that new general education hires have preparation in gifted education
- Provide research evidence that professional development in gifted education to general education teachers improves curriculum, instruction and achievement for all learners.
• Support districts in meeting the needs of struggling and advanced learners at the same time.
• Support districts in developing strategic planning models to map gifted education needs and priorities.
• Establish federal, state and district goals for gifted professional learning
• Wider dissemination of NAGC standards to administrators
• Develop trained teacher cadres
• Increase the availability of high quality professional learning materials and experiences based on research

Proposed actions to mitigate political factors. The actions proposed by the experts to mitigate the negative political factors were in response to the questionnaire item, “What actions could be taken within the next ten years that might mitigate the negative political factors and positively influence school administrators’ decisions regarding the professional learning of elementary and middle school general education teachers related to gifted education?”

Gifted education experts. Gifted education experts suggested that advocacy efforts at the federal level to “move away from NCLB” might serve to mitigate the influence of the political factors on school administrators’ professional development decisions. One such action would be advocacy for changes in assessment, specifically “measuring the growth of all children in all subjects.” Lobbying for federal and state mandates for gifted education might serve to set priorities for professional learning in gifted education, in similar ways that special education mandates have focused school administrators’ prioritization of professional learning on the needs of special education
students. Short of mandates for gifted programming, or perhaps to rally support for mandates, the experts proposed increased efforts to disseminate information related to the influence that federal mandates have had on gifted education. To this end, the experts proposed that the National Association for Gifted Children (NAGC) could “take on stronger lobbying efforts to raise awareness of how the gifted are languishing in this era of NCLB.”

At the state and local levels, the gifted education experts suggested state requirements for professional development in gifted education for all general education teachers. Furthermore, they proposed that, in the absence of state requirements, districts should institute their own requirements for professional learning in gifted education for general education teachers.

**Professional development experts.** The professional development experts suggested that “skillful” advocacy efforts at the federal, state, and local levels, designed to promote the importance of professional learning in general, could positively influence administrators’ decisions related to professional development. These actions would be supported by research evidence to show the positive influence that professional learning has on teacher practice and student learning.

**School administration experts.** The school administration experts proposed one action to mitigate the negative political factors. The experts suggested that the “changing of AYP and API” might serve to mitigate the influence of the political factors on school administrators’ professional development decisions.

**Actions to mitigate political factors.** The actions proposed to mitigate the political factors identified by the experts include:
• Advocate for federal mandates related to gifted education
• Federal, state, and/or local adoption of assessments measuring growth of all students in all subjects
• Federal or state mandates or local policies requiring coursework in gifted education for administrators
• State and local requirements for preparation and professional development in gifted education for all general education teachers.
• NAGC might take on stronger lobbying efforts to promote awareness of "languishing" gifted and the effects of NCLB on gifted education

Proposed actions to mitigate economic factors. The actions proposed by the experts to mitigate the negative economic factors were in response to the questionnaire item, “What actions could be taken within the next ten years that might mitigate the negative economic factors and positively influence school administrators’ decisions regarding the professional learning of elementary and middle school general education teachers related to gifted education?”

Gifted education experts. Gifted education experts suggested that a federal and/or state mandate for gifted education might influence funding, and ultimately provide an incentive for administrators to provide professional development in gifted education. Currently, there is no federal mandate for gifted education, and state mandates are widely disparate, and many that exist are weak. As one gifted education expert stated, “At present the national government is curtailing the one source of funding we have in gifted education, the Javits Grant. Money talks and administrators are happy to take advantage of it when it is available.” A gifted education expert also suggested funding for
professional development that is linked to gifted student outcomes could positively influence school administrators’ decisions.

**Professional development experts.** Beyond designated funding for professional learning in gifted education, the professional development experts suggested that providing and promoting job-embedded professional learning that does not require additional resources could positively influence school administrators’ decisions. This requires greater acceptance of job-embedded professional development and adequate staffing, according to one professional development expert. The professional development experts suggested that movement from funding one-time speakers toward funding ongoing job-embedded professional learning might mitigate the negative economic factors that influence administrators’ decisions.

**School administration experts.** The school administration experts proposed that earmarked funds for gifted education could influence professional learning. The experts suggested that designated funding could influence the provision of professional learning beyond the professional development that is currently mandated, and suggest that “funding formulas that provide incentives to support efforts in the district” could mitigate the negative economic factors that influence administrators’ decisions.

**Actions to mitigate economic factors.** The actions proposed to mitigate the economic factors identified by the experts include:

- Funding for professional development linked to outcomes in student learning
- Designated federal, state and local funding for gifted education professional development
• Promote job-embedded professional development that does not require additional resources

Proposed actions to mitigate social factors. The actions proposed by the experts to mitigate the negative social factors were in response to the questionnaire item, “What actions could be taken within the next ten years that might mitigate the negative social factors and positively influence school administrators’ decisions regarding the professional learning of elementary and middle school general education teachers related to gifted education?”

Gifted education experts. The gifted education experts proposed increased advocacy efforts to change the perception that gifted students can “make it on their own” without appropriately differentiated curriculum and instruction. The experts suggested that wider dissemination of research-based best practices in gifted education, including the extensive work that has been done in the gifted education field to promote the identification and service delivery for traditionally underrepresented groups of gifted children, might improve attitudes of administrators toward gifted education in general. Following the feedback of Round One, a school administration expert commented that he was unaware that there were gifted students that were underrepresented in gifted programs, illustrating the potential need for this proposal. Efforts to inform and educate administrators related to the unmet needs of gifted students could foster more positive attitudes toward gifted students and mitigate some of the negative social factors identified by the experts.

Professional development experts. The professional development experts proposed actions that would foster a commitment to the academic growth of all students.
The experts suggested that advocacy efforts to convince policy makers, educators, and the public of the connection between ensuring that all students achieve their academic potential and the global competitiveness of our nation may influence community perception and, ultimately, administrators' decisions related to professional learning. The professional development experts proposed efforts to build a supportive learning culture in schools to positively influence professional learning.

**School administration experts.** The school administration experts proposed that gifted education be set as a federal, state and district goal. Purposeful planning for professional learning in gifted education could help administrators to set priorities related to professional learning.

**Actions to mitigate social factors.** The actions proposed to mitigate the social factors identified by the experts include:

- Promote administrators’ understanding of equity as it relates to gifted education
- Disseminate information to administrators regarding gifted program and service delivery models, and the efforts made by the field to promote access to gifted education services for under-represented groups of gifted students to increase positive attitudes toward gifted education
- Promote the importance of all students’ achieving their potential as a factor related to global competitiveness
- Work to change prevalent attitudes and misunderstandings related to gifted students being able to make it on their own
Feedback of Round One Data

Feedback of Round One data was displayed in a matrix (see Tables 2-5) and distributed to expert participants via e-mail. Expert participants were invited to make comments or pose questions related to the data display. It should be noted that the feedback provided to the experts included responses that were summarized, and, when appropriate, representative quotes selected by the researcher were included. One gifted expert commented that, although her thinking did not change, it was expanded by the responses of other experts. In this instance, she had not previously considered the role of professional organizations as having influence for or against gifted education.

One professional development expert did not feel that separate preparation for those who work with gifted students, as suggested by gifted education experts, was the best approach. This expert preferred “an approach that ensures that every student has the best teaching every day and achieves, minimally, a year’s learning for each year of school. Focusing on all students and their unique learning needs does more for all students rather than some.” This response assumes that there is an adequate understanding of the unique learning needs of gifted learners, and that teachers have the capacity to facilitate a year’s worth of learning for these students without specialized training. School administration experts commented on a gifted education expert’s response related to the use of growth measures, stating that the use of growth measures for assessments may help promote learning for all students. Although only one-third of the experts chose to make comments on the Round One data, there were clear indications that perhaps new understandings and perspectives were developed through participation in the first round of the Delphi process.
Round Two

The Round Two questionnaire included a set of rating scales in which experts were asked to rate the importance of the factors, and the desirability and feasibility of the actions proposed in Round One. The rating scale was developed by Turoff (1975), and included a “no judgment” option to ensure that participants were able to opt out of any item they felt unprepared to answer. These rating scales have been used in Delphi studies to identify areas of consensus and polarization of responses.

The purpose for this phase of the study was to collect data related to informed judgments made by the group as a whole, and to identify areas of agreement (consensus) or disagreement (polarization), if any, between the expert participants relative to the importance they place on each of the factors, and the desirability and feasibility of each of the proposed actions. There was slight attrition between Rounds One and Two, and 11 of 12 total participants completed the Round Two questionnaire. This expert sample size is appropriately valid and manageable for a Delphi study, according to the literature (Clayton, 1997; Skulmoski et al., 2007; von der Gracht, 2008).

See Appendix C for detailed tables displaying the subgroup responses. The responses are displayed as percentages, with actual counts in parentheses. The group responses are reported first and include all subgroups of gifted education (n=5), professional development (n=3), and school administration (n=3) experts. Subgroup information follows, and percentages for each subgroup are based on the number of participants in each group. Care should be taken when interpreting these percentages, since the subgroup samples are small and unequal in number, but are reported to display the relative value of the actual counts.
Decision Criteria for Consensus

Decision criteria for determining group consensus were selected using guidelines suggested by Green (1982), as cited in Hsu & Sanford (2007), for four point Likert-type rating scales used in Delphi studies. For the purposes of this study, consensus was reached when 70% of the group responses fell within two adjacent rating categories. See Appendix C, Tables 1-3 for detailed group ratings. The factors, or proposed actions, that are shaded in rose tones indicate group consensus as determined through the application of this criteria. Little guidance is available to determine decision criteria for polarization in Delphi studies. For the purposes of this study, group polarization was indicated if less than 30% of responses fell within each rating category. The factors shaded in gray tones in Table C1 indicated responses that suggested polarization within the group.

Group Ratings

Group ratings of the importance of the factors. The experts as a group reached consensus on the importance of the factors in 30% of the identified factors. This percentage indicates consensus of the expert group as a whole, and not consensus between subgroups, which will be reported later in this chapter. For a detailed report of the group rating data see Appendix C, Table C1.

The factors that were rated “important” or “very important” by consensus of the expert group included two political factors, two educational factors and one economic factor. No social factors were rated as important by consensus of the group. Important factors by consensus include:

• Federal NCLB and special education mandates
• Community and parental pressure
• Competing and contradictory priorities
• The scale of professional development required for successful implementation of new strategies
• Designated federal, state, and local funding for professional learning
• Community attitudes towards education spending

The expert group also reached consensus that some factors were "unimportant" or "slightly important". The factors rated as unimportant included three educational factors and one social factor. No political or economic factors were rated as unimportant by consensus of the group. Unimportant factors by consensus include:
• Narrowly focused professional development
• Reliance on outside consultants to provide professional development
• Administrator access to NAGC standards
• Community attitudes toward teachers in general

The experts' responses were polarized as a group in response to some factor ratings. The factors that showed polarization in the ratings of importance between groups include two political factors, four educational factors and one social factor. Polarizing factors include:
• Standardized assessments do not measure growth of all students in all subjects
• State requirements for gifted coursework or PD for teacher certification or licensure
• Principal preparation programs do not include gifted education
• District commitment to professional learning of administrators related to teachers' professional development
• Administrators' evaluations linked to the quality of professional learning in schools
• Pressure to keep all teachers in classrooms all the time
• Negative reaction/attitudes to gifted education by administrators

Group ratings of desirability of actions. The expert group rated the level of desirability of the actions proposed by the experts in Round One (see Appendix C, Table C2). Using the decision criteria established (70% of responses falling in adjacent rating categories), the group showed consensus in their ratings of desirability for 74% of the actions proposed. All of the responses showing consensus in desirability fell within the categories of "desirable" or "very desirable". It should be noted that, although the group as a whole showed consensus on the desirability of the actions, further analysis of subgroup responses reported later in this paper will reveal some polarization between subgroups related to the desirability of these actions. Actions that the experts agreed by consensus were desirable include:

• Advocate for federal mandates related to gifted education.
• Changes in administrative preparation programs and licensure exams to include gifted education.
• Provide research evidence that PD in gifted education to general education teachers improves curriculum, instruction and achievement for all learners.
• Support districts in meeting needs of struggling and advanced learners at the same time.
• Promote job-embedded professional development that does not require additional resources.
- Strategic planning model that maps gifted needs and priorities
- Promote understanding of equity as it relates to gifted education
- Disseminate information to school administrators regarding gifted program and service delivery models and the efforts being made in the field to promote access to gifted education to under-represented populations of gifted students
- Establish federal, state, and district goals for professional learning in gifted education
- Build a supportive professional learning culture in schools
- Promote the importance of student achievement of potential as a factor related to global competitiveness
- National Association for Gifted Children (NAGC) take on stronger lobbying efforts for awareness of “languishing” gifted students
- Wider dissemination of the NAGC standards to administrators
- Work to change assumptions about gifted students’ making it on their own
- Celebrate and acknowledge teachers’ successful differentiation efforts for gifted
- Develop trained teacher cadres
- Increase access to gifted professional learning experiences created by researchers

**Group ratings of the feasibility of actions.** The group rated the feasibility of the actions proposed in Round One (see Appendix C, Table C3). Applying the decision criteria of 70% of responses falling in adjacent rating categories, the group showed consensus in ratings of feasibility for 60% of the actions proposed. The areas showing consensus fell within the “possibly feasible” and “definitely feasible” rating categories. The actions that were rated by group consensus as feasible include:
• Advocate for federal mandates related to gifted education.
• Promote administrators’ expectations that new general education hires have preparation in gifted education
• Provide research evidence that PD in gifted education to general education teachers improves curriculum, instruction and achievement for all learners
• Support districts in meeting needs of struggling and advanced learners at the same time
• Promote job-embedded professional development that does not require additional resources
• Strategic planning model that maps gifted needs and priorities
• Promote understanding of equity as it relates to gifted education
• Disseminate information to school administrators regarding gifted program and service delivery models and the efforts being made in the field to promote access to gifted education to underrepresented populations of gifted students
• Build a supportive professional learning culture in schools
• Promote the importance of student achievement of potential as a factor related to global competitiveness
• Wider dissemination of the NAGC standards to administrators
• Work to change assumptions about gifted students making it on their own
• Celebrate and acknowledge teachers’ successful differentiation efforts for gifted
• Develop trained teacher cadres

The group rated some actions more desirable than feasible including; “changes in administrative preparation programs and licensure exams to include gifted education”,
“establish federal, state and district goals for professional learning in gifted education”, “NAGC take on stronger lobbying efforts”, and “increase access to gifted professional learning experiences”. The group of experts rated the proposal to promote administrators’ expectations that new general education hires have preparation in gifted education as more feasible than desirable.

Actions that the group agreed were both desirable and feasible include:

- Advocate for federal mandates related to gifted education.
- Provide research evidence that PD in gifted education to general education teachers improves curriculum, instruction and achievement for all learners
- Support districts in meeting needs of struggling and advanced learners at the same time
- Promote job-embedded professional development that does not require additional resources
- Strategic planning model that maps gifted needs and priorities
- Promote understanding of equity as it related to gifted education
- Disseminate information to school administrators regarding gifted program and service delivery models and the efforts being made in the field to promote access to gifted education to under-represented populations of gifted students
- Build a supportive professional learning culture in schools
- Promote the importance of student achievement of potential as a factor related to global competitiveness
- Wider dissemination of the NAGC standards to administrators
- Work to change assumptions about gifted students making it on their own
Celebrate and acknowledge teachers’ successful differentiation efforts for gifted
Develop trained teacher cadres

Summary of group ratings. The group ratings of the experts revealed consensus
in rating the importance of the factors, the desirability of the actions, and the feasibility of
the actions. The group ratings revealed polarization only in the ratings of the importance
of the factors. In rating the importance of the factors, the experts achieved consensus on
educational and political factors more frequently than social and economic factors. Most
areas of consensus leaned toward ratings of “important” or “very important”, but in three
educational factors and one social factor, the consensus leaned toward “unimportant”.
The educational factors rated by the group as unimportant were “narrowly focused
professional development”, “reliance on outside consultants”, and “administrator access
to NAGC standards”. The social factor rated as unimportant by the group was
“community attitudes toward teachers in general”.

When rating the desirability and feasibility of actions, the experts reached
consensus most frequently on actions that were proposed to mitigate educational and
social factors. Where consensus was seen, the ratings were in the desirable and feasible
categories. These group ratings should be interpreted cautiously, as they do not tell the
whole story. A subgroup analysis was necessary to reveal polarizations not apparent in
the group analysis.

Analysis of Group Ratings by Subgroup

An analysis of ratings by subgroup revealed some divergence that was not evident
in the analysis of the group data. It should be noted that the purpose for this phase of the
study was not to generate consensus among the group, but to expose any underlying
differences in the subgroups’ judgments related to professional learning in gifted
education. It is probable that the group rating analysis was skewed toward the judgment
of the gifted education experts, since this group was twice as big as the other subgroups.
A subgroup analysis was necessary to diminish the influence of subgroup size. This
analysis was used to determine what difference, if any, there was between subgroup
ratings, and to more accurately describe the areas of consensus and polarization.

Subgroup analysis of importance of factors. An analysis of the subgroup
ratings of the importance of factors revealed some differences in ratings between the
subgroups that were not evident in the group data. Three factors that showed group
consensus also showed polarization upon subgroup analysis. Furthermore, some group
factors that were polarized in the group analysis revealed patterns in polarization between
subgroups that were not immediately apparent. Table 6 represents the factors that were
identified as important by subgroup ratings.

Subgroup analysis of group consensus items. Three of the factor items that
appeared to show consensus in the group analysis of the importance ratings also showed
polarization between subgroups upon further analysis. These three items were:

- Federal NCLB and special education mandates
- Community and parental pressure
- Interests of the school board

The majority of professional development and gifted education experts rated the
factor item, “Federal NCLB and special education mandates,” as “important” or “very
important”; yet, 2/3 of the school administration experts rated this factor as
“unimportant”, or “slightly important”. The consensus that was seen in the group data
actually existed only between the majority of professional development and gifted education experts. The school administration experts disagreed with the consensus of the other members of the group. The school administration experts’ rating of the importance of the influence of federal mandates on administrators’ decisions appears inconsistent with their responses to the open-ended questions in Round One. The comments of the school administration experts in Round Two were often focused on the influence of mandates on decision-making related to professional learning. It is possible that the school administration experts’ opinions changed between Rounds One and Two in response to their participation.

Also showing consensus in group analysis, but polarization by subgroup, was the factor item “community and parental pressure.” The group data suggested importance of this item by consensus; yet, when analyzed by subgroup, the majority of the professional development experts rated this item as “slightly important”, in disagreement with the majority of school administration and gifted education experts who rated this as an “important” or “very important” factor.

The third group consensus factor that subgroups were polarized in their ratings was “interests of school board.” The school administration and gifted education experts were aligned in their ratings of “important” or “very important” for this factor, differing from the “slightly important” rating of all of the professional development experts. The discrepancy in ratings between the professional development experts and the other experts in the last two factor items may reflect the roles held by the experts and professional development experts’ distance from the daily practice of school administration.
<table>
<thead>
<tr>
<th>FACTOR</th>
<th>School Administration</th>
<th>Professional Development</th>
<th>Gifted Education</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Educational Factors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrator preparation and professional</td>
<td>I</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td>learning in gifted education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competing initiatives/priorities.</td>
<td>I</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td>Time allocation/constraints</td>
<td>I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State/local professional learning standards</td>
<td>I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The scale of professional development</td>
<td>I</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td>District commitment to professional learning</td>
<td>I</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td>Administrators related to teachers' professional development</td>
<td>I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of shared responsibility for gifted students' education</td>
<td>I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Narrowly focused professional development</td>
<td>I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methods of Identification</td>
<td>I</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Political Factors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal (NCLB) and special education mandates</td>
<td>I</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td>Community and parental pressure</td>
<td>I</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td>Interests of the school board</td>
<td>I</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td>State requirements for coursework or PD in gifted education for teacher certification/licensure</td>
<td>I</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Economic Factors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State funding for gifted education</td>
<td>I</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td>Designated federal, state and local funding for professional learning</td>
<td>I</td>
<td>I</td>
<td></td>
</tr>
<tr>
<td>Pressure to limit non-instructional time</td>
<td>I</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Cost to provide job-embedded sustained professional learning

Social Factors

Gifted education is often not valued in schools
Acceptance of myths and assumptions (gifted students will be successful)
Misunderstandings of equity
Negative attitudes toward gifted education by administrators
Administrators know a family with a gifted child
School cultural values that support professional learning
Community attitudes toward professional learning in gifted education
Community attitudes toward educational spending

Note. "I" represents importance that was designated if the majority of the subgroup rated the item as "important" or "very important".

Subgroup analysis of group polarization items. Some factor items that showed group polarization also showed polarization between groups. These factor items include:

- State requirements for gifted coursework or professional development for teacher licensure or certification
- Principal preparation programs do not include gifted education
- Negative attitudes toward gifted education by administrators

The factor, "state requirements for gifted coursework or professional development for teacher certification or licensure", revealed differences in subgroup ratings. The majority of the school administration and gifted education experts rated this factor as "important" or "very important", in contrast to the majority of professional development
experts who rated this factor as “unimportant”. This rating by professional development experts could be explained by a comment made in response to the Round One feedback by one professional development expert who stated, “The suggestions about developing separate expectations or preparation for those who work with gifted students is not the best approach. I prefer an approach that ensures that every student has the best teaching every day and achieves minimally a year’s learning for each year of school. Focusing on all students and their unique learning needs does more for all students rather than some.”

The factor item “principal preparation programs do not include gifted education” was rated as “important” or “very important” by all of the gifted education experts and one school administration expert. The majority of professional development experts and one school administrator rated this item as “unimportant” or “slightly important”.

The majority of gifted education and school administration experts rated the factor item “negative reaction/attitudes to gifted education by administrators” as “important” or “very important”, in contrast to the majority of professional development experts who rated this item as “unimportant” or “slightly important”.

**Subgroup analysis of other items.** Several factor items rated by the group did not show consensus or polarization in the group analysis, but when examining subgroup responses, some patterns in disagreement between subgroups were revealed. Polarization between subgroups in the factor items described above occurred most often in response to social factor ratings (42%). Polarization was also evident between subgroups in rating educational (25%) and political (17%) factors.
The factors that school administration and gifted education experts rated as “important”, in disagreement with the professional development experts who rated them as “unimportant”, include:

- Time allocation
- State funding for gifted education
- Gifted education is often not valued in schools
- Community attitudes toward professional learning in gifted education

One factor item, “state and local professional learning standards” was rated “unimportant” by the school administration and gifted education experts, in disagreement with the majority of professional development experts who rated this item “important”. The importance placed on professional learning standards by the professional development experts is consistent with the strong focus on the development and adoption of professional learning standards seen in the open-ended responses of professional development experts in Round One.

The importance ratings of some items revealed alignment between the professional development and gifted education experts, who rated the item “important”, in disagreement with the school administration experts who rated them “unimportant”, include:

- School cultural values that support professional learning
- Assumption that gifted students will be successful

One factor item, “administrators know a family with a gifted child”, was rated as unimportant by the majority of professional development and gifted education experts, in contrast to the school administration experts who rated this item “important.”
A pattern of polarization emerged from the subgroup analysis. Rarely did the professional development and school administration experts’ importance ratings align. Polarization between subgroups occurred most often between the professional development experts and the gifted education and school administration experts, whose responses aligned more often with one another than with the professional development experts. The majority of the items that the professional development experts disagreed with school administration and gifted education experts were educational or social factors. For detailed information regarding the subgroup ratings of the importance of the factors, see Appendix C, Table C4.

Subgroup analysis of desirability of actions. Several of the actions proposed by the experts achieved consensus of desirability in the group ratings. No polarization was seen in the group analysis of the ratings of the desirability of the proposed actions. Analysis of the subgroup responses revealed some subgroup polarization in ratings.

Subgroup analysis of group consensus items. Five of the proposed actions that were rated desirable by consensus of the experts in the group analysis showed subgroup disagreement upon further analysis. These actions include:

- Changes in administrative preparation programs and licensure exams to include gifted education
- Strategic planning model that maps gifted needs and priorities
- Establish federal, state, and district goals for professional learning in gifted education
- Develop trained teacher cadres
Subgroup analysis revealed similar patterns in alignment of ratings that were seen in the ratings of importance. Four of the five group consensus items listed above revealed subgroup differences between professional development experts' ratings and the ratings of the other experts. The only proposed action of the five consensus actions listed above that did not show alignment between school administration and gifted education experts was "changes in administrative preparation programs and licensure exams to include gifted education;" that was rated as "undesirable" by the school administration experts alone.

Subgroup analysis of other items. Another theme emerged from the analysis of subgroup ratings of other actions. The school administration and professional development experts rated several proposed actions "undesirable" or "very undesirable", compared to the desirable ratings of the gifted education experts. These actions are related primarily to the adoption or promotion of requirements for professional learning for teachers and/or administrators. These factors include:

- Mandates requiring coursework in gifted education for administrators
- State and local requirements for preparation and professional development in gifted education for all general education teachers
- Promote administrators' expectations that new general education hires have preparation in gifted education.
- Designated federal, state and local funding for gifted education
These undesirable ratings of mandated professional learning were consistent with the data from Round One in which no school administration experts mentioned administrative preparation or professional learning as a factor that influenced decisions in their open-ended responses. These “undesirable” ratings of designated funding by the professional development and school administration experts, however, were inconsistent with some of the open-ended responses of professional development and school administration experts in Round One that supported increases in designated funding for professional learning. This inconsistency might be interpreted as support for increased funding for professional development that is not specific to gifted education.

One proposed action, “Federal, state, and local adoption of assessments measuring growth of all students in all subjects” was rated as a “desirable” or “very desirable” action by the majority of school administration and gifted education experts, in contrast to the majority of professional development experts who rated this action as “very undesirable” or “undesirable”.

The ratings of desirability of actions that showed polarization among subgroups were most often actions to mitigate negative educational factors (70%), followed by actions to mitigate political factors (20%) and actions to mitigate negative economic factors (10%). Actions to mitigate negative social factors were generally rated as desirable by the majority of all subgroups. School administration and gifted education experts were often in alignment with their ratings of the desirability of actions, in disagreement with the ratings of professional development experts. Almost as frequently, school administration and professional development experts’ ratings of desirability aligned, contrary to the ratings of the gifted education experts. Only once did the gifted
education and professional development experts' ratings align with one another in their disagreement with the school administration experts. See Table 7 for a comparison of desirability and feasibility ratings by subgroup. For detailed information regarding the subgroup ratings of desirability of the actions see Appendix C, Table C5.

Subgroup analysis of feasibility of actions. Some polarization in the ratings of the feasibility of the proposed actions was seen between subgroups that were not evident in the group data analysis.

Subgroup analysis of group consensus item. Only one action item that showed consensus in the group analysis revealed polarization between subgroups upon further analysis. The item, "promote administrators' expectations that new general education hires have preparation in gifted education", was rated as "possibly feasible" or "definitely feasible" by the majority of professional development and gifted education experts, but as "definitely unfeasible" or "possibly unfeasible" by the majority of school administration experts.

Subgroup analysis of other items. Other action items that did not appear in the group analysis to show polarization or consensus in the experts' ratings of feasibility revealed differences between subgroups upon further analysis including:

- Federal, state and local adoption of assessment measuring growth of all students in all subjects
- State and local requirements for preparation and professional development in gifted education for all general education teachers
- Changes in administrative preparation programs and licensure exams to include gifted education
Ratings of the Desirability and Feasibility of Proposed Actions by Subgroup

<table>
<thead>
<tr>
<th>Proposed Actions</th>
<th>School Administration</th>
<th>Professional Development</th>
<th>Gifted Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actions to Mitigate Educational Factors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Changes in administration preparation programs and licensure exams to include gifted education topics</td>
<td>F</td>
<td>D</td>
<td>D/F</td>
</tr>
<tr>
<td>Promote administrators' expectation that new general education hires have preparation in gifted education</td>
<td></td>
<td>F</td>
<td>D/F</td>
</tr>
<tr>
<td>Provide research evidence that professional development in gifted education to general education teachers improves curriculum, instruction and achievement for all learners</td>
<td>D/F</td>
<td>D/F</td>
<td>D/F</td>
</tr>
<tr>
<td>Support districts in meeting the needs of struggling and advanced learners at the same time</td>
<td>D/F</td>
<td>D/F</td>
<td>D/F</td>
</tr>
<tr>
<td>Support districts in developing strategic planning models to map gifted education needs and priorities</td>
<td>D/F</td>
<td>F</td>
<td>D/F</td>
</tr>
<tr>
<td>Establish federal, state, and district goals for professional learning in gifted education</td>
<td>D/F</td>
<td>F</td>
<td>D/F</td>
</tr>
<tr>
<td>Wider dissemination of the NAGC standards to administrators</td>
<td>D/F</td>
<td>D/F</td>
<td>D/F</td>
</tr>
<tr>
<td>Acknowledge and celebrate teachers' efforts to provide successful differentiation for gifted students to increase motivation for professional learning</td>
<td>D/F</td>
<td>D/F</td>
<td>D/F</td>
</tr>
<tr>
<td>Develop trained teacher cadres</td>
<td>D/F</td>
<td>F</td>
<td>D/F</td>
</tr>
<tr>
<td>Increase access to professional learning experiences in gifted education that are created by researchers</td>
<td>D</td>
<td></td>
<td>D/F</td>
</tr>
<tr>
<td>Actions to Mitigate Political Factors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advocate for federal mandates related to gifted education</td>
<td>D/F</td>
<td>D/F</td>
<td></td>
</tr>
<tr>
<td>Federal, state or local adoption of assessments measuring the growth of all students in all subjects</td>
<td>D</td>
<td>F</td>
<td>D/F</td>
</tr>
<tr>
<td>Mandates requiring coursework in gifted education for administrators</td>
<td>F</td>
<td>F</td>
<td>D/F</td>
</tr>
<tr>
<td>Federal mandates or state/local requirements for preparation and professional development in gifted education for all general education teachers</td>
<td></td>
<td></td>
<td>D/F</td>
</tr>
<tr>
<td>NAGC take on stronger lobbying efforts for awareness of &quot;languishing&quot; gifted students and influence of NCLB</td>
<td></td>
<td></td>
<td>D/F</td>
</tr>
</tbody>
</table>
### Actions to Mitigate Economic Factors

<table>
<thead>
<tr>
<th>Action</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding for professional development linked to outcomes in student learning</td>
<td>D/F</td>
</tr>
<tr>
<td>Designated federal, state and local funding for gifted education professional development</td>
<td>D/F</td>
</tr>
<tr>
<td>Promote job-embedded professional development that does not require additional resources</td>
<td>D/F, D</td>
</tr>
</tbody>
</table>

### Actions to Mitigate Social Factors

<table>
<thead>
<tr>
<th>Action</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promote administrators’ understanding of equity as it relates to gifted education</td>
<td>D/F, D/F</td>
</tr>
<tr>
<td>Disseminate information to administrators regarding gifted program and service delivery models, and the efforts made by the field to promote access to gifted education services for under-represented groups of gifted students to increase positive attitudes toward gifted education</td>
<td>D/F, D/F</td>
</tr>
<tr>
<td>Build a supportive professional learning culture in schools</td>
<td>D/F, D/F</td>
</tr>
<tr>
<td>Promote the importance of all students achieving their potential as a factor related to global competitiveness</td>
<td>D/F, D/F</td>
</tr>
<tr>
<td>Work to change prevalent attitudes and misunderstandings related to gifted students being able to make it on their own</td>
<td>D/F, D/F</td>
</tr>
</tbody>
</table>

**Note.** "D" indicates the majority of the subgroup rated the item as "desirable" or "very desirable". "F" indicates the majority of the subgroup rated the item as "possibly feasible" or "definitely feasible".

The analysis of these items revealed no patterns in subgroup polarization. The majority of the professional development and gifted education experts rated “federal, state, and local adoption of assessments measuring growth of all students in all subjects” as feasible, in contrast to the majority of the school administration experts who rated this item “unfeasible”. The majority of school administration and professional development experts rated the action item, “state and local requirements for preparation and professional development in gifted education for all general education teachers”, as “unfeasible”, in contrast to the gifted education experts who rated this item “feasible”.

Also related to professional learning of administrators, the item, “changes in administrative preparation programs and licensure exams to include gifted education”, was rated by the majority of school administration and gifted education experts as “feasible”, and by the majority of professional development experts as “possibly unfeasible”. It is interesting to note that this action was perceived as “undesirable”, yet “possibly feasible”, by school administration experts, and as “desirable”, yet “possibly unfeasible”, by professional development experts.

The feasibility of action ratings showed the most consensus across subgroups. There were five action items in total that revealed differences between subgroup ratings. Two of these items were proposed actions to mitigate political factors, two actions to mitigate negative educational factors, and one action to mitigate negative economic factors. Most of the proposed actions to mitigate negative social factors were rated as “desirable” by consensus of the group. The feasibility ratings revealed more diverse alignment of thinking between subgroups than in the desirability and importance scales. For detailed information regarding the subgroup ratings of the feasibility of the proposed actions, see Appendix C, Table C6.

**Summary of subgroup analysis.** The higher incidence of consensus seen between subgroups in the feasibility rating scale may be due to the nature of the judgment required. The feasibility of an action requires the experts to possess practical knowledge of the realities of school administration to decide which actions are possible. With this practical knowledge, it is possible that the experts reached common ground more easily than with the value judgments required in the other scales. Rating importance or desirability of an action requires a value judgment based on knowledge and experience
with gifted education. The subgroup polarization seen in the importance and desirability scales may have been due to some basic differences in values toward gifted education between subgroups. The professional development experts' ratings diverged from the other subgroups in the importance and desirability scales more frequently than the school administration and gifted education experts' ratings did.

Four factor items that showed consensus in the group ratings also showed consensus of the subgroups. No political factors showed consensus of importance in the group or subgroup analysis. The factors rated “important” by the group and all of the subgroups include:

- Competing initiatives or priorities
- The scale of professional development required to successfully implement new strategies
- Designated federal, state and local funding for professional learning
- Community attitudes toward educational spending

Nine of the proposed actions were rated as both desirable and feasible by the group and by all three of the subgroups. These actions include:

- Provide research evidence that PD in gifted education to general education teachers improves curriculum, instruction and achievement for all learners
- Support districts in meeting needs of struggling and advanced learners at the same time
- Promote administrators' understanding of equity as it relates to gifted education
Disseminate information to school administrators regarding gifted program and service delivery models and the efforts being made in the field to promote access to gifted education to underrepresented populations of gifted students

Build a supportive professional learning culture in schools

Promote the importance of student achievement of potential as a factor related to global competitiveness

Wider dissemination of the NAGC standards to administrators

Work to change prevalent attitudes and assumptions about gifted students making it on their own

Celebrate and acknowledge teachers’ successful differentiation efforts for gifted students

Round Three

Feedback of Round Two data was provided to participants via e-mail attachment. The experts were invited to comment on the feedback data. It was clearly communicated to participants that this was an optional round for participation. One expert participant commented on the Round Two feedback, saying that participation in the study did not change his/her thinking, but expanded his/her “appreciation that all students’ learning needs are important and too often the focus, driven by current federal policy, has focused on only those students who are underachieving.” In addition, the expert commented that the roles held by participants influenced their perspectives and contributed to the expected differences in item ratings between the subgroups.

Summary

Through three iterative rounds of questionnaires, the school administration,
professional development and gifted education experts identified the factors that influence school administrators' professional development decisions, and proposed actions that could be taken in the future to mitigate the negative factors that influence school administrators' decisions regarding professional learning of general education teachers related to gifted education. Analysis of the open-ended responses and the ratings of the importance of the factors and the desirability and feasibility of the proposed actions revealed differences in the informed judgments of the experts that contributed to a deeper understanding of the perspectives each group of experts brought to the study. These different perspectives provide rich descriptive data to inform the research. Chapter V includes a discussion of the key findings, conclusions, implications for policy and practice, and recommendations for further study.
CHAPTER V
DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS FOR POLICY, PRACTICE AND RESEARCH

Overview

An advantage of using a Delphi methodology, compared to traditional survey methods, is the level of knowledgeable judgment of the expert sample and the depth of information that can be collected over the iterative questionnaires. The expert participants in this study contributed informed judgments from the varied perspectives they developed in their diverse roles in the field of education. The structure of the study around this "complementary association" (Achilles et al., 1997) of experts facilitated the identification of a variety of factors that influence school administrators' decisions related to the professional learning of general education teachers in gifted education, and elicited diverse proposals for future actions that hold promise for the resolution of the underlying problem. Differences in the judgments of experts from each subgroup exposed valuable insights into the varied perspectives of the experts and added to the depth of the research.

The larger problem of limited educational experiences that are appropriately differentiated for the needs of gifted students by general education teachers has been long-standing and pervasive in the United States (Archambault et al., 1993; Maguire, 2008; Moon et al., 1995; Westberg, et al., 1993; Westberg & Daoust, 2003). Some research suggests that the lack of access to professional learning opportunities for general education teachers limits their capacity to differentiate effectively for gifted students (Gubbins et al., 2002; Hansen & Feldhusen, 1994; Johnsen et al., 2002; Reis et al., 1993;
Van Tassel-Baska, 2006). This study was conducted to investigate the underlying reasons for limited professional learning experiences for general education teachers in gifted education; specifically, the factors that influence administrators' decisions regarding professional learning in gifted education. The findings from this study extend the limited literature that has been published related to the role that administrators play in gifted education. There is little or no research in the published and reviewed literature to establish a link between social, political, educational and economic factors, school administrators and the professional learning of general education teachers in gifted education. The findings from this study suggest that there is, in fact, a link between these factors and administrators' decisions regarding the professional learning of general education teachers related to gifted education. Few research studies in gifted education have drawn from the expertise and knowledge of experts in the field, and fewer still have sought to bring experts with parallel, but complementary, experience and knowledge together. The qualitative nature of this study precludes generalization of these findings; however, the findings can be used to inform policy, practice, and future research.

Discussion of Key Findings

The discussion of key findings addresses Research Questions 1-4, and places the findings from this study in context with the extant literature. The key findings are discussed in relation to four themes that emerged from the study: differing perspectives on the problem, the necessity of informed decisions, the challenge that competing priorities pose for administrators, and the need for professional learning to develop general education teachers' capacity to address the needs of all students.
Differing Perspectives on a Complex Problem

The experts were invited to participate in this study because they held expertise in areas of knowledge associated with professional learning in gifted education. The professional development and school administration experts were not expected to have expertise in gifted education—only in their area of experience. The differences in the expertise and perspectives of the participants added dimensions to the research findings. The gifted education experts contributed specific knowledge of the characteristics and needs of gifted students and an understanding of the associated challenges that these special needs pose for school administrators. The professional development experts offered a “big picture” view of professional learning and expertise in effective professional learning practices. The school administration experts lent a decidedly practical “on-the-ground” perspective to the discussion.

The different perspectives of the experts allowed the researcher to view the problem through three distinct lenses. These varied perspectives uncovered issues beyond those that have been discussed previously in the literature. Findings from this study allow the discussion to move beyond “if only” statements. “If only administrators would...” or “If only we had...” are not valid solutions to an ongoing problem. The complementary expertise of the school administration, professional development, and gifted education experts offered insights into the problem that might guide efforts that lead to a lasting resolution to the problem.

The findings from this study suggest that many interrelated factors influence the decisions that administrators make about professional learning. Administrators’ decisions involve complex interactions between the factors. The experts’ responses
suggested that educational, social, political and economic factors are frequently inextricably linked together in their influence on administrators. Experts from all of the subgroups linked the political factors to educational factors in their responses. This might be illustrative of the experts’ perception of the influence that the federal mandates of NCLB have had on administrators’ practice related to both general education and gifted education. The educational factors were linked most often to economic factors, frequently by the gifted education experts, suggesting that money influences decisions about gifted education, a finding supported in the literature (Baker, 2001; Baker & McIntyre, 2002; Baker & Friedman-Nimz, 2004; Van Tassel-Baska, 2006). The school administration experts most often linked educational factors to social factors, perhaps suggesting the role that values play in administrators’ decisions. The various configurations of relationships between the factors that emerged from the experts’ responses are numerous and complex. Findings from this study suggest that a web of related factors contribute individually, and in concert with one another, to influence administrators’ decisions related to professional learning.

The complexity of the relationships among the factors intensifies the challenge for administrators to orchestrate these considerations, when attempting to reach informed and productive professional learning decisions. Administrators navigate the political pressures they face within the context of their own belief and value systems. Successful management of the pressures that arise from these factors requires the employment of decision-making models, such as win-win (consensus) approaches, that facilitate informed analysis and evaluation. Informed decisions require administrators, policymakers and advocates to seek out information and perspectives from others to limit the
influence of personal bias and values to bring about more viable solutions and fewer “if only” statements.

The Challenge of Competing Priorities

School administrators face daily challenges in making decisions, when confronted with educational needs that can appear contradictory. Findings from this study suggest that administrators face pressure from federal mandates, state or district policies and requirements, the values and needs of community members and parents, their own values, diminishing economic resources, and the diverse needs of students, when setting priorities for professional learning. Furthermore, findings suggest that administrators are influenced by a set of interrelated factors that determine the type, amount and focus of the professional learning.

Federal mandates. The influence of federal mandates on professional learning was a concern that was repeatedly raised by the experts in this study. The experts’ responses suggested that administrators feel pressure to prioritize professional learning focused on struggling learners, due to the accountability pressures of NCLB. This finding is supported by research studies showing that administrators often prioritize the needs of struggling students over gifted students when making curricular and instructional decisions (Mendoza, 2006; Moon et al., 1995; Reis et al., 2003). The status afforded other student groups with special learning needs by mandated services and funding was a contradiction in policy highlighted by the experts. There are no federal mandates for gifted education and disparate state mandates, leaving little regulatory incentive for administrators to provide professional learning in gifted education.

The experts proposed advocacy actions aimed at establishing federal mandates to
require gifted education programming or professional learning in gifted education. They indicated that such actions might help to mitigate the unintended consequences of the NCLB mandates. Mandates might increase the value placed on gifted education, offer an incentive to designate funding for professional learning in gifted education, and establish gifted education as an educational priority in schools. Although most of the professional development and gifted education experts indicated that this action was both desirable and feasible, the majority of school administration experts disagreed. Furthermore, the professional development experts raised ethical concerns about whether mandates that are focused on the needs of one group of students are appropriate. These perspectives suggest an argument for ensuring that careful analysis of the consequences and benefits of any new mandates is conducted before advocating for their adoption. Mandates may force administrators to concentrate on the needs of gifted students, in the same way that special education mandates have guaranteed services and funding to meet the needs of special education students. Special education regulations and accountability mandates that are focused on minimal proficiency have created incentives for administrators to focus economic and instructional resources on nonproficient students, unintentionally limiting learning opportunities for gifted students. Before any attempts are made to advocate for mandates for gifted education services, funding or professional learning, potential problem analysis should be done to anticipate and avoid any possible negative consequences of such mandates for other students. That said, mandates for gifted education should not be dismissed without careful consideration of the benefits that increased focus on gifted students’ achievement might provide.

**Measuring minimal proficiency.** Current accountability pressures associated
with the federal and state mandates have focused assessment, practice and discussion on
the measurement of minimal proficiency, rather than on the growth of all students. This
has resulted in the narrowing of the curriculum to those subjects tested, often limiting
curriculum and instruction to basic knowledge in language arts and math, and has
fostered an increased focus on the needs of nonproficient students (Maguire, 2008;
Mendoza, 2006; Moon et al., 2007; Reis et al., 2003; Valli & Buese, 2007). The experts
raised concerns that accountability pressures leave administrators with little choice but to
spend limited resources and time on professional learning to address the needs of
nonproficient students. In essence, as the saying goes, "what is measured matters".

Administrators would be wise to consider the consequences that the focus on
proficiency has had on the day-to-day learning experiences of all students, including
those that are gifted. The experts in the study raised the possibility that most educators
outside of gifted education are unaware of the consequences of the mandates on gifted
students. One professional development expert reported that she came to appreciate this
situation through her participation in the study. If educators are unaware of these
consequences, it is probable that policymakers and the public are also unaware of them.
Increased efforts to disseminate research showing that these policies have had negative
consequences for gifted students should be aimed at federal, state and local policy
makers, administrators, teachers and parents. Knowing that gifted students’ needs are
often ignored in the current educational climate might compel administrators to carefully
analyze the results of the state assessments and disaggregate the data to get a clear picture
of all students’ performance. Setting measurable goals for gifted learners could create
incentives for administrators and teachers to ensure that gifted students have
appropriately differentiated experiences to meet challenging goals. Policy makers might consider alternatives to minimal proficiency measures and look at growth measures, as the experts suggested, as a possible way to address the inequities that the current system promotes.

**Pressures from the school board, community and parents.** The findings from this study suggest that administrators face pressures from the school board, community members and parents when making professional learning decisions. Priorities set by the local school board may influence the priorities that school administrators’ set for professional learning, according to the experts. There is little research in the published literature to support this, but some research from the general education literature suggests that although administrators consider input from others in the school organization when making decisions, they fit that input into their own belief system (Heck et al., 1989).

Local school boards generally have influence on broad school initiatives and programming, such as gifted programs, but most professional learning decisions are left to administrators. Administrators might feel pressure from the school board to provide relevant professional learning, if gifted education is a district priority, but the research suggests they must also find some value in it. Movement toward increasing general education teachers’ capacity to meet the needs of gifted learners requires that all stakeholders are knowledgeable and invested in such efforts, including the school board, parents, community, administration and teachers.

The experts indicated that strong parental support for professional learning can be a positive influence, but they caution that administrators do not always perceive parental concern positively. Some school administrators see parental pressure for increased focus...
on gifted education as "pushy", according to the experts. In response to this negative perception, administrators might provide minimal professional development, essentially paying it "lip service". These findings suggest that parental pressure may not influence administrators' decisions as much as the administrators' perception of parents' intent and the underlying values associated with the pressure. Administrators should reflect on their own biases and values when interpreting the actions and concerns of the parents and the community. Administrators would benefit from efforts to develop the habits of mind they need to genuinely listen to the needs of others, recognize personal bias in their interpretations, and gather information from existing research and stakeholders to clarify the situation if necessary. An informed and inclusive decision-making process might build relationships with parents and communities to move toward insuring that teachers are prepared to meet the needs of all learners, including gifted learners.

**Time constraints.** Time constraints can exacerbate the issues associated with competing or contradictory initiatives. The school/work day for teachers is limited by contractual obligations and professional learning must fit into designated time. Several studies have found that teachers increasingly report that limited time for collaborative planning hindered their efforts to differentiate for gifted students (Maguire, 2008; Moon et al., 1995; Moon et al., 2002). The experts suggested that scarcity of economic resources might pressure administrators to maximize the instructional time of teachers, limiting noninstructional time available for general education teachers to engage in professional learning experiences. It is essential that administrators explore professional learning options that are job-embedded to minimize the time teachers spend out of the classroom.
The findings of this study suggest that time constraints, along with the pressures to focus on the needs of nonproficient students, induce administrators to place a lower priority on professional learning needs that focus on gifted education. The experts proposed efforts to support and promote the use of strategic planning models to map the needs of gifted students, and to set priorities for gifted education, suggesting they intensify the priority given to gifted education. Strategic planning for the needs of distinct learning groups, including gifted, ELL, and special education students, could assist administrators in developing comprehensive professional learning plans that maximize cost and time efficiency. A strategic plan could encourage purposeful efforts to provide high quality professional learning for general education teachers designed to meet the needs of the diverse learners, including gifted students.

**Funding and resources.** Limited economic resources and funding require administrators to prioritize professional learning needs. The findings from this study suggest that school administrators may feel pressured to fund only the professional development that is mandated. Limited federal and state funding is available to administrators for professional development in gifted education. The Javits Grant provides the only federal funding available for gifted education, and is a competitive discretionary grant. Baker and Friedman-Nimz (2004) found that many state grants for gifted education funding are discretionary and often competitive. The discretionary nature of funding for gifted education raises ethical concerns. School administrators should not have to rely on competitive or discretionary funding to provide an adequate education for students with special learning needs, whether they are gifted or special education students. Funding formulas that take into account the special needs of gifted
students could create incentives for administrators to provide professional learning.

With no federal funding and limited state funding for gifted education, local allocation is the only funding available to administrators for professional learning in gifted education. Baker (2001) reported that factors that influenced local funding were the cost of the service, the ability of the community to pay for it, and the desire of the community to fund the service. All three of these factors were identified by the experts in this study as influential factors, and illustrate the symbiotic link between economic factors and the value that the community and administrators place on gifted education. Efforts to make the benefits of gifted education more visible to community members could promote equity in funding and increase the desire to fund professional learning.

The experts agreed that community attitudes toward educational spending might influence administrators’ decisions, acknowledging the power that the community holds in most local funding processes. In small school districts especially, state funding for gifted education programming is limited or nonexistent (Baker, 2001), increasing the need for local funding and the reliance on community support. It is possible that, even with funding available for gifted education, administrators do not provide gifted education professional development to general education teachers. Baker and Friedman-Nimz (2004) found that students in states with funding only, or mandates only, were less likely than average to attend schools with gifted programs, and schools in states with mandates and funding were more likely to offer gifted programs. Should mandates or professional learning requirements become a reality, designated funding might be necessary to ensure their execution.

In the absence of mandates and designated funding for gifted education,
Administrators should consider professional learning experiences that cost less than traditional professional development to implement, and that support the development of teachers' ability to meet the needs of a diverse population of students. The findings of this study suggest that professional learning experiences that address general education teachers' capacity to meet the needs of all learners might be attractive to administrators, since it might be more cost- and time-efficient than traditional professional learning. Administrators must get creative to meet the diverse professional learning needs in their schools. Careful needs assessment and an analysis of the factors that prevent them from funding adequate professional learning in gifted education might help administrators see alternative options. Job-embedded professional learning, cost-sharing with neighboring districts, online professional learning, or professional learning communities that are local, national or global would open new avenues for professional learning in gifted education.

Informed Decisions

The experts suggested that the limited knowledge and experience administrators have with gifted students might lead them to base professional learning decisions on mandates, assumptions and prevalent myths. Although limited research has been done investigating administrators' knowledge related to gifted education, there is evidence that many administrators have little or no coursework in gifted education (McGough, 2003), and that mandates and high stakes testing have influenced administrators' decisions related to curriculum and instruction for gifted students (Moon et al., 2007). The findings from this study extend the published research to suggest that these factors, along with limited understanding of the needs of gifted students and acceptance of myths and assumptions, influence the professional learning decisions of administrators.
Recognizing the need for professional learning. Although the gifted experts rated administrators’ knowledge of gifted education as important, the professional development and school administrators did not. The differences in the experts’ ratings of importance may be indicative of the general education community’s assumption that administrators do not need specific coursework in gifted education. This assumption presupposes that (a) administrators understand the needs of gifted students through experience, (b) it is unnecessary for school leaders to understand the characteristics and academic needs of special populations of students in order to recognize the need for professional learning, and/or (c) administrators understand enough about professional learning to make effective decisions. These assumptions may not be valid.

For administrators to make informed professional learning decisions related to the needs of special populations of students, they must have a clear understanding of the instructional strengths and weaknesses of the teaching staff. Without this understanding, there might be little recognition of need. There is some evidence that teachers believe they differentiate more than they actually do (Gentry et al., 2002; Moon et al., 1995), and that there is little administrative supervisory focus on differentiation practices (Maguire, 2008; Moon et al., 1995). Furthermore, research shows that little evaluation of the influence of professional learning on teachers’ differentiation practices for gifted students occurs (Gubbins et al., 2002). This research describes the current state of affairs in professional learning, and suggests that administrators may be unaware of teachers’ ability to meet the needs of gifted students. The experts suggested that district-wide commitment to professional learning for administrators that is focused on the needs of adult learners, and best practice in professional development, would positively influence
the quality of professional learning. The findings from this study, in context with the research literature, suggest that, in order to design appropriate professional learning experiences for general education teachers related to gifted education, administrators must acquire knowledge related to the characteristics and needs of gifted students, hold a clear picture of teachers' capacity to differentiate for these students, and develop an understanding of the most effective ways to deliver professional development to general education teachers. A comprehensive assessment of need that includes observational and teacher survey data might help administrators develop a clear picture of the needs associated with professional learning for general education teachers in gifted education.

The gifted education experts suggested that federal, state or local mandates to establish required coursework for administrators could increase the knowledge that administrators have related to gifted education. Most professional development and school administration experts rated this proposal as undesirable. More agreeable to the professional development experts was the suggestion that changes in administrative preparation programs and the inclusion of gifted education topics in licensure exams could encourage administrators to seek professional learning related to gifted education, and ultimately influence professional learning decisions. There may be movement toward this end. The current School Leaders Licensure Examination developed by the Educational Testing Service includes items related to gifted education.

Regardless of the need for outside incentives and requirements, administrators have a responsibility to make informed decisions about professional learning. Unfortunately, the findings from this study suggest that administrators' decisions about their own, and their teaching faculty's, professional learning might be informed by the
mandates that hold them most accountable. Pursuing their own learning about gifted education may simply be a low priority for administrators in the current political and educational climate. In the absence of research that links administrators' knowledge about gifted education to improved services for gifted students, there is little support to advocate for such mandates. Mandates and regulations to promote professional learning for special populations of students should not be necessary for school leaders. School administrators must hold themselves accountable for pursuing the knowledge necessary to meet the needs of all of their students to insure that they are achieving their potential. With adequate knowledge of the needs of gifted learners, administrators might feel more comfortable evaluating and supervising teachers' differentiation efforts. Increased supervision of general education teachers' efforts to differentiate curriculum and instruction for gifted students might communicate to the entire school community that professional learning to develop teachers' capacity to meet the needs of these learners is expected and valued.

Acceptance of myths and assumptions. Without adequate preparation and knowledge of the needs of gifted students, the experts suggest that administrators adhere to myths about gifted education that influence their decisions. There is some research support for this assertion. Leithwood and Stager (1989) reported that, when problem solving, administrators do not seek new information and often base their decisions on assumptions or previous experience. One pervasive myth acknowledged by the experts is that gifted students can achieve academic success without adequate educational attention. This myth is persistent and pervasive, and can influence administrators' perception of the need for professional development in gifted education for general education teachers,
according to the experts. The majority of school administration experts rated this factor as having lower importance than the professional development and gifted education experts. This might suggest that the school administration experts either do not believe that this is an important factor, or they do not recognize that acceptance of this assumption is harmful for gifted students.

The acceptance of myths and assumptions may be an especially influential factor in schools with populations of gifted students that do not fit the traditional gifted mold. Some research suggests that educators accept traditional conceptions of giftedness that are not consistent with the characteristics of students who are culturally diverse or poor (Schroth & Helfer, 2009; Moon & Brighton, 2008; Miller, 2009). This might lead to the underidentification of gifted students from culturally diverse or socioeconomically disadvantaged populations. Without adequate knowledge of the characteristics and needs of gifted students, administrators are likely to base their decisions related to professional learning in gifted education on values, assumptions or myths.

The uncritical acceptance of myths related to gifted education by administrators and the public suggest that efforts to dispel these myths and assumptions about gifted students and gifted education are needed. The majority of experts indicated that actions toward dispelling these myths would be desirable and feasible. This action requires a concerted effort to reach out to school administrators and educators to distribute accurate information about the characteristics of gifted students and appropriate educational programs and services. Collecting survey data to explore prevalent attitudes and assumptions related to gifted education in a school district might inform administrators' communication and planning efforts. Administrators, teachers and policy makers who
accept these myths may not seek information on their own, so efforts should be made to reach out to these groups and disseminate research through professional journals, online professional learning communities or webinars, and conferences outside of those associated with gifted education.

Lack of shared responsibility for gifted students' education. In schools with a gifted education teacher or specialist, gifted education experts suggested that administrators often accept the misconception that the gifted specialist is exclusively responsible for the educational needs of gifted students. Acceptance of this departmentalized view of gifted education could lead administrators to see little need for general education teachers to engage in professional learning related to gifted students. Findings from this study suggest that the tendency for administrators to abdicate responsibility for gifted education to gifted education specialists is linked to the decisions they make about professional learning. It should be noted that professional development and school administration experts did not consider this an important factor, a finding that might suggest a rejection of shared responsibility for gifted education, or simply that these experts perceive that it is unimportant to administrators' decisions. Administrators must go beyond mission statements espousing shared commitment and put these values into daily practice. Gifted specialists or teacher leaders with experience and training in gifted education can promote and facilitate professional learning in gifted education, but administrators cannot abdicate their own responsibility to these specialists. Administrators must lead the entire school community toward developing a culture of shared responsibility through supervision of differentiation practices and promoting a culture of learning related to differentiation of curriculum and instruction to meet the
needs of gifted students.

**Gifted education is not valued in schools.** Some experts expressed concern that hostility toward gifted students was growing, due to the "administrative neglect" in the current high-pressure climate of NCLB. Setting priorities for instruction, funding allocations, and professional learning might be influenced by a general lack of value for gifted education, or by administrators' negative attitudes toward gifted education. None of the experts who participated in this study expressed negative attitudes toward gifted students, but the school administration experts made comments that revealed a perception that professional learning in gifted education was an "extra" expense or commitment that was met after other more pressing needs were satisfied. Findings from this study suggest that many interrelated factors influence the value placed on gifted education by administrators. Attitudes, assumptions, pressures from mandates, diminished resources, limited understanding of the needs of gifted students, the values of community, school board and parents collectively influence the value administrators place on professional learning in gifted education.

Actions that promote positive attitudes toward gifted education might influence the provision of professional learning in gifted education. The experts suggested that, if administrators were aware of the advocacy efforts made by gifted education researchers and advocates to promote access to gifted education programs for traditionally underserved populations of gifted students, they might develop more positive attitudes toward gifted education in general. This suggestion implies that administrators who view gifted education as elitist or a high-income issue may come to view gifted education as more relevant to their own needs if they understood the challenges and benefits
associated with identification and programming for low-income disadvantaged gifted students.

The experts proposed wider dissemination of the professional learning standards published by NAGC and indicated this action was both desirable and feasible. Professional learning standards in gifted education might offer a vision and rationale for professional learning in gifted education to administrators. There is little empirical data to suggest that school administrators use the available gifted education standards to promote or evaluate professional learning in gifted education (CSDGP-NAGC, 2009; Farkas & Duffett, 2008). However, wider dissemination and promotion of professional learning standards might encourage administrators to collect data to assess the need for professional learning in gifted education, and foster a culture of shared responsibility for the education of gifted students. Wider dissemination of the gifted education programming and professional learning standards to policy makers at the state and federal levels might prompt closer examination of the influence that the mandates and pressures of high stakes testing have had on gifted students. The standards might inform efforts at the federal and state levels to mitigate the negative consequences of these policies on gifted students.

Misunderstandings of equity. The experts suggested that misunderstandings of equity related to gifted education might influence administrators’ perceptions of the need for gifted programs and professional learning in gifted education. There is some research suggesting that many administrators’ decisions are influenced by the values of equity, justice and fairness (Marshall, 1992; McGough, 2003). Equity in education is a concept that has been misinterpreted by teachers, administrators, and policy makers. Equal and
equitable are not synonymous. The experts raised concerns that gifted education can be seen as inequitable because it is perceived as elitist. It is equitable, not elitist, to provide gifted students with the most appropriate curriculum and instruction, just as it is equitable to provide special education students with the curriculum and instruction that is most appropriate to their needs. The experts pointed to antiability grouping sentiments as examples of this misunderstanding of equity. The expectation should be that all students have access to curriculum and instruction that is equally responsive to their needs. The antidote for misunderstanding is education. Policy makers, administrators, and teachers must have access to, and read, current research that supports effective instructional practices to increase the achievement of gifted students, such as flexible ability grouping, cluster grouping, grade and subject acceleration and differentiated curriculum. With increased awareness and understanding, administrators might reexamine their perceptions of equity, and be more inclined to promote organizational learning and academic expectations that ensure equitable education for gifted students, regardless of the potential political ramifications.

Addressing the Needs of All Learners

The pressures associated with the accountability measures of the federal NCLB mandates have resulted in an increased focus on nonproficient students (Mendoza, 2006; Moon et al., 2007; Reis, 2003). The experts suggested that it would be desirable and feasible to support districts in the development and implementation of professional learning that increases general education teachers’ ability to meet the needs of struggling learners and advanced learners at the same time. Since many general education teachers have both struggling and advanced students in their classes, professional learning to build
their capacity to differentiate curriculum and instruction is necessary. Effective differentiation requires teachers to develop an adequate understanding of the characteristics and academic needs of struggling and advanced students, the capacity to modify and adapt curriculum, the ability to understand when modification is appropriate, and the instructional skills to implement these strategies.

**Focus of professional development.** The gifted education experts in this study suggested that, when professional learning in gifted education is provided, it is often focused on pieces of programs or curricula, with little attention to the greater vision for these learners. There is research to suggest that in-service professional development in gifted education for many teachers is predominantly delivered as informal conversations, print information, conferences and workshops (Gubbins et al., 2002). These findings suggest a prevalence of drive-by professional development experiences in gifted education. There is a need to move professional learning in gifted education from the surface learning that addresses the “how” questions to professional learning that addresses the “why” questions. Administrators and teachers must understand the “why” of differentiation - the defining needs and characteristics of gifted students, the differences between general education and gifted students, and the best ways to meet those needs. The delivery of professional learning is meaningless if it is not focused on what is important to know and to be able to do. Administrators should be encouraged to promote professional learning that allows teachers to understand the characteristics and academic needs of students with all types of learning differences, including gifted students, so that general education teachers are equipped to address these learning differences. Finally, there is a need to establish clear and purposeful goals for gifted
students that are understandable and achievable for general education teachers.

The scale of professional development required. Adequate skill and knowledge to effectively differentiate for gifted students can be acquired through high quality professional learning experiences (Hansen & Feldhusen, 1994; Van Tassel-Baska et al., 2008). The experts suggested that professional learning should be sustained, job-embedded and ongoing, to insure the successful implementation of curriculum and instruction that is appropriate for gifted students. Several studies have established a link between job-embedded and/or ongoing professional learning in gifted education and improved differentiation practices (Hansen & Feldhusen, 1994; Gubbins et al., 2002; Johnsen et al., 2002; Van Tassel-Baska et al., 2008). The effectiveness of job-embedded professional learning is established in the literature. There are nine experimental, or quasi-experimental, studies in the general education professional development literature that can draw cause and effect conclusions about professional development and student achievement, and eight of these studies use job-embedded structures (Carpenter et al., 1989; Cole, 1992; Duffy et al., 1986; McGill-Franzen et al., 1999; McGutchen et al., 1999; Saxe et al., 2001; Sloan, 1993; Tienken & Achilles, 2003).

Ongoing job-embedded professional learning requires a long-term commitment of focus, time and resources. It might be tempting, as the experts suggest, for administrators to choose the cheapest short-term professional development options in the face of diminishing resources. Aside from the research that establishes job-embedded professional learning as effective in increasing students’ achievement, there are time and cost benefits. Tienken and Stonaker (2007) reported on a job-embedded program that did not cost additional money when existing money was reallocated to change the structure
of the professional development. Peer coaching, lesson study, critical friends groups, and other job-embedded professional learning structures limit the time that teachers spend out of the classroom and maximize instructional time. Administrators must look at the "big picture" when making decisions and resist the temptation to look at short-term professional learning solutions, simply because they appear to cost less.

Job-embedded professional learning would require that an individual teacher, or a group of teachers, in the building or district have the requisite knowledge and skills to coach other teachers to differentiate curriculum and instruction for gifted students. The experts suggested that the development of trained teacher cadres could increase professional learning opportunities. Teachers with a strong command of the knowledge and skills necessary to differentiate curriculum and instruction for all learners, including gifted students, might provide job-embedded, sustained professional learning. This model of professional coaching has been shown in the literature to improve teachers’ differentiation practices for gifted students (Gubbins et al., 2002; Johnsen et al., 2002).

In addition to trained teachers, the experts suggested that local school administrators adopt an expectation that all new general education hires have some professional preparation in gifted education. The experts in this study suggested that local administrators could easily adopt this expectation. This action requires no additional money, time or planning on the part of local school districts.

Administrators must find ways to increase the capacity of their teaching staff to effectively differentiate for all students. This might begin with making a time and money investment in developing expertise in gifted education in one or more teachers. The efforts should not end there. Administrators must model professional learning that leads
to the understanding of the needs of all learners, and communicate an expectation through 
words and actions that general education teachers pursue the same learning.

**Dissemination of research on benefits of gifted pedagogy.** The dissemination 
of research evidence to support the efficacy of using gifted pedagogy in general 
education classrooms to promote the achievement of all students might promote 
professional learning in gifted education. High quality research has been conducted and 
published by the National Research Centers for Gifted and Talented (NRC/CT), funded 
through the Javits Grant and other researchers, that demonstrates the efficacy of gifted 
pedagogy for general education students and students with special needs or from minority 
and high poverty backgrounds. This research supports the use of enrichment, enrichment 
clusters, and differentiation in general education environments (Beecher & Sweeny, 
2008; Reis, Gentry & Park, 1995), challenging curriculum based on gifted education 
principles (Hockett, 2009; Little, Feng, Van-Tassel-Baska, Rogers, & Avery, 2007; Van 
Tassel-Baska & Brown, 2007), School-wide Enrichment Model (SEM) reading strategies 
(Reis et al., 2003), grouping with content differences (Kulik, 1992; Tieso, 2002), and 
cluster grouping (Gentry, 1999) practices. The research exists, but a substantial 
challenge remains in getting administrators’ attention to read the research, understand the 
implications and to act on their knowledge in practical and meaningful ways. A thorough 
understanding of the research evidence might convince policymakers, community 
stakeholders, and educators of the value that professional learning in gifted education can 
bring to the broader educational community.

The experts, by consensus, indicated that continued and increased dissemination 
of this research is a desirable and feasible action. Due to the lack of value placed on
gifted education in the broader educational community, gifted researchers frequently have a small audience for their work. Dissemination of empirical evidence that professional learning in gifted education improves the instructional capacity of general education teachers and positively impacts the achievement of all students could be done through professional journals outside of the gifted education field. Promotion of the research in administrative professional journals could find a wider audience among educators and build support for gifted education at local, state and federal levels.

**Recommendations for Future Research**

Further research is needed to clearly establish an empirical link from administrators' decisions to the effectiveness of professional development for general education teachers related to gifted education, and ultimately to student achievement. Although a few qualitative studies have linked some political, social, economic and educational factors to gifted education in general or gifted programs and services, a clearer understanding of how these factors influence gifted programs and services, and ultimately student achievement, is needed. Empirical evidence that links administrative knowledge about gifted education with the delivery of adequate curriculum and instruction for gifted students might provide incentives for increased professional learning for administrators, ultimately enhancing teachers' professional learning. More qualitative studies and quantitative studies, including quasi-experimental studies, are needed to establish a research base that supports advocacy and reform efforts aimed at improving administrative learning and professional learning experiences in gifted education topics.

This study was limited by the willingness of the participants to commit to iterative
questionnaires related to the same topic. More rounds may have clarified some of the questions that remained after analysis and provided richer, more detailed understandings of the experts' opinions and judgments. Researchers and advocates who are established in the field of gifted education could initiate future Delphi studies. An established reputation in the field might enable a respected and known researcher to attempt more rounds without fear of attrition. Delphi studies that further examine the actions proposed in this study with panels of experts from different fields within, and outside of, education may provide additional insights into the desirability and feasibility of the actions to enhance efforts to effect informed transformational change in professional learning.

Concluding Remarks

Findings from this study suggest that many interrelated factors influence school administrators, when making decisions about the professional learning of general education teachers in gifted education. Some of these factors are simple, but many share complex relationships with other factors. The experts offered different perspectives on a persistent problem, and the findings from this study suggest that the role or position one holds in the educational field may influence how factors related to gifted education are perceived, judged or valued. This descriptive qualitative case study adds to the published literature base by establishing a connection between antecedent factors and the decisions that school administrators make related to professional learning in gifted education. Although the findings of this study cannot be generalized beyond the experts who participated, the informed judgments of these experts can be used as a basis for administrative practice, gifted education reform/advocacy efforts, and to suggest research agendas that explore some of the issues and concerns raised by the experts in this study.
The actions proposed by the experts and discussed in this paper represent a beginning. Forward movement to find solutions to a problem that a review of research, theory, and literature has shown to be pervasive and persistent will require a shift in the thoughts and actions of administrators, policy makers, and gifted education advocates. This study shows that the factors that influence administrators' professional learning decisions are meshed together with a depth and complexity that will be difficult to disentangle without cooperation between administrators, policymakers and those who advocate for gifted students. Honest reflection and sincere attempts to examine and address inequities in education and professional learning regarding gifted education at the federal, state and local levels are needed. Communication among policymakers, administrators and researchers could elicit common goals and outcomes for students with varied specialized learning needs. Common goals might promote equity and lead to economically feasible and educationally sound professional learning opportunities that meet the needs of all learners, including gifted students.

Getting the relevant research into the hands of administrators and seeing that they interpret and apply the research evidence in meaningful and appropriate ways remains a challenge. Advocacy by varied professional organizations to disseminate research and promote professional learning that provides general education teachers with optimal pedagogical knowledge and skills to meet the needs of all students could have more influence than individual groups alone. Collection of accurate data, a thorough review of existing research, coalition building, communication, and a willingness to examine entrenched assumptions and values could facilitate transformational change in the professional learning experiences of general education teachers in gifted education.


Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.


National Middle School Association and the National Association for Gifted Children (2010). *Meeting the needs of high ability and high potential learners in the middle grades.* Joint position statement of the National Middle School Association and the National Association for Gifted Children. Retrieved April 10, 2010 from http://www.nagc.org/index2.aspx?id=375


Valentine, J., & Cooper, H. *Effect size substantive interpretation guidelines: Issues in the interpretation of effect sizes.* Retrieved April 7, 2010 from the Institute of


Appendix A

Letters of Solicitation and Informed Consent
Letter of Solicitation for School Administration Experts

Dear (School administration expert),

The purpose for this email is to request your participation in a study conducted by Lenore Cortina, a doctoral student in the Executive Ed.D. in K-12 School Administration Program in the Educational Leadership, Policy and Management department of Seton Hall University. The study, School Administrators and the Professional Development of General Education Teachers in Gifted Education Topics: A Delphi Study, is a descriptive qualitative study employing a Delphi methodology.

School administrators play an important role in the professional learning of teachers. The purpose for the study is to identify and analyze the educational, political, economic and social factors that might influence the decisions of school administrators regarding the professional learning of general education teachers related to gifted education. Experts in gifted education, professional development and school administration were invited to participate in the study to provide perspectives that will offer a broader view of the issues surrounding the problem than would be generated by one of these groups alone. The study will also elicit alternatives for future actions from the expert panelists that might stimulate the promotion of professional learning in gifted education to general education teachers on a more wide-ranging basis.

Expert panelists were selected for participation in the study based on criteria identifying recognized expertise in gifted education, professional development or school administration. You are invited to participate in this study because you have been recognized as an expert in school administration through your distinction as a 'National Distinguished Principal' by the National Association of Elementary School Principals, or as the 'National Superintendent of the Year' by the American Association of School Administrators.

Participation in this study is completely voluntary, and participants may leave the study at any point. The study requires participation in at least two rounds of on-line questionnaires, with each round requiring 30 minutes or more of participants' time. It is not necessary to complete the survey in one sitting. You will be able to save your responses and return to the questionnaire at your convenience.

An email with a link to the web-based questionnaire will be sent via this email address within one week.

Although no direct benefits are anticipated for participants in this study, it is the researcher’s hope that participation will lead to a greater understanding of the role administrators play in the professional learning of general education teachers related to gifted education. Participants will become part of an anonymous group communication process with experts in related fields that they may not normally communicate with. The future orientation of the study may inform research efforts and facilitate change in gifted education policy and practice in local school districts.
The study will be conducted using a short series of web-based questionnaires to facilitate anonymity of participants and to allow the completion of questionnaires at the convenience of participants. The round one questionnaire will consist of one demographic question and 12 open-ended questions. Panelists will be asked to identify factors that influence school administrators' decisions related to the professional learning of general education teachers in gifted education topics, and to propose future actions that might mitigate negative factors or promote professional learning. Data collected in round one will be analyzed and fed back to participants for consideration before completing the second questionnaire. Every effort will be made to minimize the time between rounds.

Based on round one data, round two items will be constructed and expert panelists will be asked to complete a rating scale to rate the importance of the factors and the desirability and feasibility of proposed future actions. Round three does not require participant response, but will consist of feedback of round two data analysis and participants will be offered the opportunity to comment on round two or revise their responses if they choose to do so.

Anonymity will be assured through the web-based survey delivery settings. Participants will be assigned an identification number when the first questionnaire is delivered via email. Only the researcher will have access to the names of the respondents. Identification numbers will be used in the collection, analysis, and reporting of data and at no time will the names of the respondents be revealed.

Confidentiality of information regarding the expert panelists solicited for participation in this study will be maintained. All data collected from the study will be stored by the researcher on a flash drive and locked in a secure location. Only the researcher and her mentor will have access to the data collected in this study. The data will be kept in a secure location for at least three years and will then be destroyed. A statement of informed consent will be attached to the next email you will receive containing the link to the questionnaire.

No response to this email is required.

Thank you in advance for considering taking part in the study and contributing your knowledgeable voice to this important discussion.

Lenore Cortina
Seton Hall University
lenore.cortina@student.shu.edu
Dear (Gifted education expert),

The purpose for this email is to request your participation in a study conducted by Lenore Cortina, a doctoral student in the Executive Ed.D. in K-12 School Administration Program in the Educational Leadership, Policy and Management department of Seton Hall University. The study, *School Administrators and the Professional Development of General Education Teachers in Gifted Education Topics: A Delphi Study*, is a descriptive qualitative study employing a Delphi methodology.

The purpose for the study is to identify and analyze the educational, political, economic and social factors that might influence the decisions of school administrators regarding the professional learning of general education teachers related to gifted education. Experts in gifted education, professional development and school administration are invited to participate in the study to provide perspectives that will offer a broader view of the issues surrounding the problem than would be generated by one of these groups alone. The study will also elicit alternatives for future actions from the expert panelists that might stimulate the promotion of professional learning in gifted education to general education teachers on a more wide-ranging basis.

Expert panelists were selected for participation in the study based on criteria identifying recognized expertise in gifted education, professional development or school administration. You are invited to participate in this study because you have been recognized as an expert in gifted education based on your published works or your work with professional organizations or publications.

Participation in this study is completely voluntary, and at any point participants may leave the study. The study requires participation in at least two rounds of on-line questionnaires, with each round requiring 30 minutes or more of participants' time. It is not necessary to complete the survey in one sitting. You will be able to save your responses and return to the questionnaire at your convenience.

An email with a link to the web-based questionnaire will be sent via this email address within one week. The study will be conducted using a short series of web-based questionnaires to facilitate anonymity of participants and to allow the completion of questionnaires at the convenience of participants. The round one questionnaire consists of one demographic question and 12 open-ended questions. Panelists will be asked to identify factors that influence school administrators' decisions related to the professional learning of general education teachers in gifted education topics, and to propose future actions that might mitigate negative factors and promote professional learning. Round one data will be analyzed and fed back to participants for revision and comment. Every effort will be made to minimize the time between rounds. Based on round one data, round two items will be constructed and expert panelists will be asked to complete a rating scale to rate...
the importance of the factors and the desirability and feasibility of proposed future actions. Round three does not require participant response, but will consist of feedback of round two data analysis and participants will be offered the opportunity to comment on round two or revise their responses if they choose to do so.

Anonymity will be assured through the web-based survey delivery settings. Participants will be assigned an identification number when the first questionnaire is delivered via email. Identification numbers will be used in the collection, analysis, and reporting of data and at no time will the names of the respondents be revealed.

Confidentiality of information regarding the expert panelists solicited for participation in this study will be maintained. All data collected from the study will be stored by the researcher on a flash drive and locked in a secure location. Only the researcher and her mentor will have access to the data collected in this study. The data will be kept in a secure location for at least three years and will then be destroyed. A statement of informed consent will be attached to the next email you receive containing the link to the questionnaire.

Although no direct benefits are anticipated for participants in this study, it is the researcher's hope that participation will lead to a greater understanding of the role administrators play in the professional learning of general education teachers related to gifted education. Participants will become part of an anonymous group communication process with experts in related fields that they may not normally communicate with. The future orientation of the study may inform research efforts and facilitate change in gifted education policy and practice.

Participant privacy and confidentiality will be maintained. The results of this study will be published as a dissertation and will be filed in the Seton Hall Library where participants may access it.

No response to this email is required.

Thank you in advance for considering taking part in this study and contributing your knowledgeable voice to this important discussion.

Lenore Cortina
Seton Hall University
lenore.cortina@student.shu.edu
Letter of Solicitation for Professional Development Experts

Dear (Professional development expert)

The purpose for this email is to request your participation in a study conducted by Lenore Cortina, a doctoral student in the Executive Ed.D. in K-12 School Administration Program in the Educational Leadership, Policy and Management department of Seton Hall University. The study, School Administrators and the Professional Development of General Education Teachers in Gifted Education Topics: A Delphi Study, is a descriptive qualitative study employing a Delphi methodology.

The purpose for the study is to identify and analyze the educational, political, economic and social factors that might influence the decisions of school administrators regarding the professional learning of general education teachers related to gifted education. Experts in gifted education, professional development and school administration are invited to participate in the study to provide perspectives that will offer a broader view of the issues surrounding the problem than would be generated by one of these groups alone. The study will also elicit alternatives for future actions from the expert panelists that might stimulate the promotion of professional learning in gifted education to general education teachers on a more wide-ranging basis.

Expert panelists were selected for participation in the study based on criteria identifying recognized expertise in gifted education, professional development or school administration. You are invited to participate in this study because you have been recognized as an expert in professional development based on your published works or your work with professional organizations or publications.

Participation in this study is completely voluntary, and at any point participants may leave the study. The study requires participation in at least two rounds of on-line questionnaires, with each round requiring 30 minutes or more of participants’ time. It is not necessary to complete the survey in one sitting. You will be able to save your responses and return to the questionnaire at your convenience.

An email with a link to the web-based questionnaire will be sent via this email address within one week. The study will be conducted using a short series of web-based questionnaires to facilitate anonymity of participants and to allow the completion of questionnaires at the convenience of participants. The round one questionnaire will contain one demographic question and 12 open-ended questions. Panelists will be asked to identify factors that influence school administrators’ decisions related to the professional learning of general education teachers in gifted education topics, and to propose future actions that might mitigate negative factors and promote professional learning. Round one data will be analyzed and fed back to participants for revision and comment. Every effort will be made to minimize the time between rounds. Based on round one data, the round two questionnaire will be constructed and expert panelists will be asked to complete a rating.
scale to rate the importance of the factors and the desirability and feasibility of proposed future actions. Round three does not require participant response, but will consist of feedback of round two data analysis and participants will be offered the opportunity to comment on round two or revise their responses if they choose to do so.

Anonymity will be assured through the web-based survey delivery settings. Participants will be assigned an identification number when the first questionnaire is delivered via email. Identification numbers will be used in the collection, analysis, and reporting of data and at no time will the names of the respondents be revealed.

Confidentiality of information regarding the expert panelists solicited for participation in this study will be maintained. All data collected from the study will be stored by the researcher on a flash drive and locked in a secure location. Only the researcher and her mentor will have access to the data collected in this study. The data will be kept in a secure location for at least three years and will then be destroyed. A statement of informed consent will be attached to the next email you receive containing the link to the questionnaire.

Although no direct benefits are anticipated for participants in this study, it is the researcher's hope that participation will lead to a greater understanding of the role administrators play in the professional learning of general education teachers related to gifted education. Participants will become part of an anonymous group communication process with experts in related fields that they may not normally communicate with. The future orientation of the study may inform research efforts and facilitate change in gifted education policy and practice.

Participant privacy and confidentiality will be maintained. The results of this study will be published as a dissertation and will be filed in the Seton Hall Library where participants may access it.

No response to this email is required.

Thank you in advance for considering taking part in the study and contributing your knowledgeable voice to this important discussion.

Lenore Cortina
Seton Hall University
lenore.cortina@student.shu.edu
INFORMED CONSENT FORM

Affiliation
The study entitled School Administrators and the Professional Development of General Education Teachers in Gifted Education Topics: A Delphi Study, is being conducted by Lenore Cortina, a doctoral student in the Executive Ed.D., K-12 School Administration Program in the Educational Leadership, Policy and Management department of Seton Hall University.

Purpose for the study
The purpose for this study is to identify and analyze factors, as perceived by experts in the fields of gifted education, professional development and school administration that might influence the decisions school administrators make regarding the professional learning of general education teachers related to gifted education. The study will also elicit alternatives for future actions from the expert panelists that might stimulate the promotion of professional development in gifted education to general education teachers on a more wide-ranging basis. The researcher will compare the level of importance the experts in gifted education, professional development, and school administration place on the influential factors and the level of desirability and feasibility each sub-group places on alternatives for future action.

Procedures
This study employs Delphi methods and will be conducted using a series of web-based questionnaires to facilitate anonymity and to allow the completion of the questionnaires at the convenience of participants. The questionnaires will be emailed to the participants in three rounds. Round one items will include open-ended questions and panelists will be asked to identify factors they believe influence school administrators' decisions regarding the professional learning of general education teachers related to gifted education, and to propose future actions that might mitigate negative factors and promote professional learning. Data collected in round one will be analyzed and fed back via email to participants for consideration before completing the second questionnaire. Based on round one data, round two questionnaire items will be constructed and expert panelists will be asked to rate the importance of the factors and the desirability and feasibility of proposed future actions in a second online questionnaire. Every effort will be made to minimize the time between rounds one, two and three. Round three does not require participant response, but will consist of feedback of round two data analysis and participants will be offered the opportunity to comment or revise round two responses if they choose to do so.

Voluntary nature of study
Participation in this study is completely voluntary, and at any point participants may leave the study. Participants can leave the study simply by leaving the website.
participants do not click the "submit" button at the end of the survey, responses and participation will not be recorded. Participants can choose to skip questions. The study entails participation in at least two rounds of on-line questionnaires, with each round requiring 30 minutes or more of participants' time.

Anonymity
Anonymity of responses will be maintained throughout the study. The web-based survey is privacy protected and the survey delivery settings will ensure anonymity. Participants will be assigned an identification number when the first questionnaire is delivered via email (i.e. “GE01” for gifted education expert #1). Only the researcher will know the names of the participants. Identification numbers will be used in the analysis and reporting of data and at no time will the names of the respondents be revealed.

Confidentiality
Confidentiality of information regarding the expert panelists solicited for participation in this study will be maintained. All data collected from the study will be stored by the researcher on a flash drive and locked in a secure location. Only the researcher, her advisor and committee will have access to the responses collected in this study. The data will remain secured for at least three years and then destroyed.

Risks or discomforts
The researcher anticipates no risks or discomfort for participants.

Benefits
Although no direct benefits are anticipated for participants in this study, it is the researcher’s hope that participation will lead to a greater understanding of the role administrators play in the professional learning of general education teachers related to gifted education. Participants will become part of an anonymous group communication process with experts in related fields that they may not normally communicate with. The future orientation of the study may inform research efforts and facilitate change in gifted education policy and practice. There is no remuneration for participating in the study.

Contact information
Questions may be directed to researcher Lenore Cortina at lenore.cortina@student.shu.edu, her mentor, Dr. Christopher Tienken at Christopher.Tienken@shu.edu, or directly to the Seton Hall Institutional Review Board at irb@shu.edu or (973) 313-6314. The study results will be published as a dissertation and will be filed in the Seton Hall Library where participants may access it.

CONSENT TO PARTICIPATE IS INDICATED BY COMPLETING AND SUBMITTING THE ONLINE QUESTIONNAIRE.

BY CONSENTING TO PARTICIPATE IN ROUND ONE, PARTICIPANTS ARE CONSENTING TO PARTICIPATE IN ROUND TWO AND OPTIONALLY.
ROUND THREE, WITH THE KNOWLEDGE THAT PARTICIPANTS ARE FREE TO WITHDRAW AT ANY POINT IN THE STUDY.
Appendix B

Rating Scale Framework
### Rating Scale Framework

#### Importance (Priority or Relevance)

<table>
<thead>
<tr>
<th>Importance Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Important</td>
<td>A most relevant point</td>
</tr>
<tr>
<td></td>
<td>First order priority</td>
</tr>
<tr>
<td></td>
<td>Has direct bearing on major issues</td>
</tr>
<tr>
<td></td>
<td>Must be resolved, dealt with or treated</td>
</tr>
<tr>
<td>Important</td>
<td>In relevant to the issue</td>
</tr>
<tr>
<td></td>
<td>Second order priority</td>
</tr>
<tr>
<td></td>
<td>Significant impact but not until other items are treated</td>
</tr>
<tr>
<td></td>
<td>Does not have to be fully resolved</td>
</tr>
<tr>
<td>Slightly Important</td>
<td>Insignificantly relevant</td>
</tr>
<tr>
<td></td>
<td>Third order priority</td>
</tr>
<tr>
<td></td>
<td>Has little importance</td>
</tr>
<tr>
<td></td>
<td>Not a determining factor to major issue</td>
</tr>
<tr>
<td>Unimportant</td>
<td>No relevance</td>
</tr>
<tr>
<td></td>
<td>No priority</td>
</tr>
<tr>
<td></td>
<td>No measurable effect</td>
</tr>
<tr>
<td></td>
<td>Should be dropped as an item to consider</td>
</tr>
<tr>
<td>No Judgment</td>
<td>No knowledge to judge this issue</td>
</tr>
</tbody>
</table>

#### Desirability (Effectiveness of Benefits)

<table>
<thead>
<tr>
<th>Desirability Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Desirable</td>
<td>Will have a positive effect and little or no negative effect on issue</td>
</tr>
<tr>
<td></td>
<td>Extremely beneficial</td>
</tr>
<tr>
<td></td>
<td>Justifiable on its own merit</td>
</tr>
<tr>
<td>Desirable</td>
<td>Will have a positive effect and little or no negative effect on issue</td>
</tr>
<tr>
<td></td>
<td>Beneficial</td>
</tr>
<tr>
<td></td>
<td>Justifiable as a byproduct or in conjunction with other Actions</td>
</tr>
<tr>
<td>Undesirable</td>
<td>Will have a negative effect</td>
</tr>
<tr>
<td></td>
<td>Harmful</td>
</tr>
<tr>
<td></td>
<td>May be justified only as a byproduct of a very desirable item, not justified as a byproduct of a desirable item</td>
</tr>
<tr>
<td>Very Undesirable</td>
<td>Will have a major negative effect</td>
</tr>
<tr>
<td></td>
<td>Extremely harmful</td>
</tr>
<tr>
<td></td>
<td>Not justifiable</td>
</tr>
<tr>
<td>Feasibility (Practicality)</td>
<td></td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Definitely Feasible</td>
<td>No hindrance to implementation</td>
</tr>
<tr>
<td></td>
<td>No research and development required</td>
</tr>
<tr>
<td></td>
<td>No political roadblocks</td>
</tr>
<tr>
<td></td>
<td>Acceptable to the public</td>
</tr>
<tr>
<td>Possibly Feasible</td>
<td>Some indication this is implementable</td>
</tr>
<tr>
<td></td>
<td>Some research and development still required</td>
</tr>
<tr>
<td></td>
<td>Further consideration or preparation to be given to political of public reaction</td>
</tr>
<tr>
<td>Possibly Unfeasible</td>
<td>Some indication this is unworkable</td>
</tr>
<tr>
<td></td>
<td>Significant unanswered questions</td>
</tr>
<tr>
<td>Definitely Unfeasible</td>
<td>All indications are negative</td>
</tr>
<tr>
<td></td>
<td>Unworkable</td>
</tr>
<tr>
<td></td>
<td>Cannot be implemented</td>
</tr>
<tr>
<td>No Judgment</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Factor</th>
<th>No Judgments</th>
<th>Unimportant</th>
<th>Slightly Important</th>
<th>Important</th>
<th>Very Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal NCLB and special education mandates</td>
<td>18.2% (2)</td>
<td>9.1% (1)</td>
<td>27.3% (3)</td>
<td>45.5% (5)</td>
<td></td>
</tr>
<tr>
<td>Disparate state monitoring and/or mandates</td>
<td>9.1% (1)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
<td>18.2% (2)</td>
<td>9.1% (1)</td>
</tr>
<tr>
<td>Standardized assessments do not measure growth</td>
<td>9.1% (1)</td>
<td>27.3% (3)</td>
<td>27.3% (3)</td>
<td>27.3% (3)</td>
<td>9.1% (1)</td>
</tr>
<tr>
<td>Influence of professional organizations</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
<td>27.3% (3)</td>
<td>9.1% (1)</td>
</tr>
<tr>
<td>Community and parental pressure</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
</tr>
<tr>
<td>Impact of School Board</td>
<td>36.4% (4)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
</tr>
<tr>
<td>State requirements for gifted course-work or PD for</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
</tr>
<tr>
<td>teacher certification or licensure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State and local professional learning standards</td>
<td>9.1% (1)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
<td></td>
</tr>
<tr>
<td>Recommendations for group consensus</td>
<td>9.1% (1)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
<td></td>
</tr>
<tr>
<td>The scale of professional development required</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>45.5% (5)</td>
<td>27.3% (3)</td>
<td></td>
</tr>
<tr>
<td>for successful implementation of new strategies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time allocation</td>
<td>9.1% (1)</td>
<td>27.3% (3)</td>
<td>9.1% (1)</td>
<td>36.4% (4)</td>
<td>18.2% (2)</td>
</tr>
<tr>
<td>Belief that gifted specialist is solely responsible for</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
<td>18.2% (2)</td>
</tr>
<tr>
<td>gifted students’ program</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal preparation program does not include</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>27.3% (3)</td>
</tr>
<tr>
<td>gifted education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Namely focused professional development</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>63.6% (7)</td>
<td>18.2% (2)</td>
<td></td>
</tr>
<tr>
<td>Reliability on outside consultants to provide</td>
<td>18.2% (2)</td>
<td>54.5% (6)</td>
<td>27.3% (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>professional development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>District commitment to professional learning of</td>
<td>18.2% (2)</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>18.2% (2)</td>
</tr>
<tr>
<td>administrators related to teachers’ professional</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrators’ evaluations linked to the quality of</td>
<td>9.1% (1)</td>
<td>27.3% (3)</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>18.2% (2)</td>
</tr>
<tr>
<td>professional learning in schools</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methods of identification</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>45.5% (5)</td>
<td>18.2% (2)</td>
<td>9.1% (1)</td>
</tr>
<tr>
<td>State funding for gifted-education</td>
<td>9.1% (1)</td>
<td>27.3% (3)</td>
<td>18.2% (2)</td>
<td>45.5% (5)</td>
<td></td>
</tr>
<tr>
<td>Cost to provide job-embedded sustained</td>
<td>9.1% (1)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
<td></td>
</tr>
<tr>
<td>professional development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure to keep all teachers in classrooms all the</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>27.3% (3)</td>
<td>18.2% (2)</td>
</tr>
<tr>
<td>time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Designated federal, state, and local funding for</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>54.5% (6)</td>
<td>18.2% (2)</td>
<td></td>
</tr>
<tr>
<td>professional learning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative reactions/attitudes to gifted education by</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
<td>9.1% (1)</td>
</tr>
<tr>
<td>teachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative reactions/attitudes to gifted education by</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>27.3% (3)</td>
<td>27.3% (3)</td>
<td></td>
</tr>
<tr>
<td>administrators</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gifted education is often not valued in schools</td>
<td>18.2% (2)</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>27.3% (3)</td>
<td>26.4% (4)</td>
</tr>
<tr>
<td>Misunderstandings of equity</td>
<td>18.2% (2)</td>
<td>18.2% (2)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
<td></td>
</tr>
<tr>
<td>School cultural values that support professional</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>18.2% (2)</td>
<td>36.4% (4)</td>
<td>18.2% (2)</td>
</tr>
<tr>
<td>learning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion that students will be successful</td>
<td>9.1% (1)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
<td></td>
</tr>
<tr>
<td>Community attitudes toward educational spending</td>
<td>18.2% (2)</td>
<td>18.2% (2)</td>
<td>45.5% (5)</td>
<td>18.2% (2)</td>
<td></td>
</tr>
<tr>
<td>Administrator acceptable to NAGC standards</td>
<td>9.1% (1)</td>
<td>36.4% (4)</td>
<td>36.4% (4)</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
</tr>
<tr>
<td>Community attitudes toward professional learning in</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
<td>18.2% (2)</td>
</tr>
<tr>
<td>gifted education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community attitudes toward teachers in general</td>
<td>9.1% (1)</td>
<td>27.3% (3)</td>
<td>63.6% (7)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Factors shaded in rose-tones indicate group consensus. Factors shaded in gray tones indicate polarization of group responses.
<table>
<thead>
<tr>
<th>Proposed Action</th>
<th>Judgment</th>
<th>Undesirable</th>
<th>Desirable</th>
<th>Very Desirable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advocate for federal mandates related to gifted education.</td>
<td>9.1% (1)</td>
<td>10% (1)</td>
<td>20% (2)</td>
<td>30% (4)</td>
</tr>
<tr>
<td>Federal, state, and local adoption of assessment measuring growth of all students in all subjects.</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
</tr>
<tr>
<td>Mandates requiring coursework in gifted education for administrators.</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
</tr>
<tr>
<td>State and local requirements for preparation and PD in gifted education for all general ed. teachers.</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
</tr>
<tr>
<td>Changes in administrative preparation programs and assessments to include gifted education.</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
</tr>
<tr>
<td>Promote administrators' expectations that new general education hires have preparation in gifted education.</td>
<td>10% (1)</td>
<td>20% (2)</td>
<td>30% (4)</td>
<td>50% (5)</td>
</tr>
<tr>
<td>Provide research evidence that PD in gifted education is linked to general education teachers improved student performance and achievement for all learners.</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
</tr>
<tr>
<td>Support districts in meeting needs of struggling and advanced learners at the same time.</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
</tr>
<tr>
<td>Funding for professional development linked to outcomes in gifted learning.</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
</tr>
<tr>
<td>Designated federal, state, and local funding for gifted education professional development.</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
</tr>
<tr>
<td>Promote job-embedded professional development that does not require additional resources.</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
</tr>
<tr>
<td>Strategic planning model that maps gifted needs and priorities.</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
</tr>
<tr>
<td>Eliminating information to school administrators regarding gifted programs and services delivery models and the efforts being made in the field to promote success in gifted education to under-represented populations of gifted students.</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
</tr>
<tr>
<td>Establish, define, state, and disseminate goals for professional learning in gifted education.</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
</tr>
<tr>
<td>Build a supportive professional learning culture in schools.</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
</tr>
<tr>
<td>Promote the importance of student achievement of potential in a factor related to global competitiveness.</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
</tr>
<tr>
<td>National Association for Gifted Children (NAGC) task force on stronger advising efforts for assessment of &quot;inquiring&quot; gifted students.</td>
<td>45.5% (6)</td>
<td>54.5% (6)</td>
<td>36.4% (4)</td>
<td>36.4% (4)</td>
</tr>
<tr>
<td>Write a declaration of the NAGC standards for administration.</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
</tr>
<tr>
<td>Work to change assumptions about gifted students making it on their own.</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
</tr>
<tr>
<td>Celebrate and acknowledge students' successful differentiation efforts for gifted students.</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
</tr>
<tr>
<td>Develop trained teacher cadre.</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
</tr>
<tr>
<td>Increase access to gifted professional learning experiences created by researchers.</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
</tr>
</tbody>
</table>

Note. Consensus of the group is indicated by rose tones and polarization by gray tones.
Table C3

Group Rating of Feasibility of Proposed Actions.

<table>
<thead>
<tr>
<th>Proposed Action</th>
<th>No Judgment</th>
<th>Definitely Unfeasible</th>
<th>Possibly Unfeasible</th>
<th>Possibly Feasible</th>
<th>Definitely Feasible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advocate for federal mandates related to gifted education</td>
<td>9.1% (1)</td>
<td>5.1% (1)</td>
<td>9.1% (1)</td>
<td>63.6% (7)</td>
<td>9.1% (1)</td>
</tr>
<tr>
<td>Federal, state, and local adoption of placement measuring growth of all students</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>45.5% (6)</td>
<td>9.1% (1)</td>
<td></td>
</tr>
<tr>
<td>Mandate required coursework in gifted education for administrators</td>
<td>9.1% (1)</td>
<td>27.3% (3)</td>
<td>63.6% (7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State and local requirements for preparation and PD in gifted education for all educators</td>
<td>18.2% (2)</td>
<td>18.2% (2)</td>
<td>45.5% (6)</td>
<td>18.2% (2)</td>
<td></td>
</tr>
<tr>
<td>Change in administrative preparation programs and support services to include gifted education</td>
<td>9.1% (1)</td>
<td>27.3% (3)</td>
<td>45.5% (6)</td>
<td>18.2% (2)</td>
<td></td>
</tr>
<tr>
<td>Provide administrators' expectations that new general education plans must promote gifted education</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>54.5% (6)</td>
<td>18.2% (2)</td>
<td></td>
</tr>
<tr>
<td>Possible research evidence that PD in gifted education to general educators improves curriculum, instruction, and achievement for all learners</td>
<td>9.1% (1)</td>
<td>23.3% (2)</td>
<td>54.5% (6)</td>
<td>18.2% (2)</td>
<td></td>
</tr>
<tr>
<td>Support districts in meeting needs of struggling and advanced learners at the same time</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>36.4% (4)</td>
<td>45.5% (5)</td>
<td></td>
</tr>
<tr>
<td>Funding for professional development linked to student learning</td>
<td>9.1% (1)</td>
<td>36.4% (4)</td>
<td>45.5% (5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Designated federal, state, and local funding for gifted education professional development</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>45.5% (6)</td>
<td></td>
</tr>
<tr>
<td>Promote job-embedded professional development that does not require additional resources</td>
<td>18.2% (2)</td>
<td>9.1% (1)</td>
<td>45.5% (6)</td>
<td>27.3% (3)</td>
<td></td>
</tr>
<tr>
<td>Strategic planning model that maps gifted needs and priorities</td>
<td>9.1% (1)</td>
<td>54.5% (6)</td>
<td>36.4% (4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promote understanding of equity as it relates to gifted education</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>27.3% (3)</td>
<td>54.5% (6)</td>
<td></td>
</tr>
<tr>
<td>Discriminate information to school administrators targeting gifted program and service delivery models and the efforts being made in the field to promote access to gifted education to underrepresented populations of gifted students</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>63.6% (7)</td>
<td></td>
</tr>
<tr>
<td>Establish federal, state, and district guidelines for professional learning in gifted education</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>54.5% (6)</td>
<td>9.1% (1)</td>
<td></td>
</tr>
<tr>
<td>Build a sustainable professional learning culture in schools</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>36.4% (4)</td>
<td>45.5% (5)</td>
<td></td>
</tr>
<tr>
<td>Promote the importance of student achievement of potential as a factor related to gifted education</td>
<td>4.1% (1)</td>
<td>9.1% (1)</td>
<td>36.4% (4)</td>
<td>45.5% (5)</td>
<td></td>
</tr>
<tr>
<td>National Association for Gifted Children (NAGC) take on stronger lobbying efforts for awareness of &quot;impossible&quot; gifted students</td>
<td>18.2% (2)</td>
<td>18.2% (2)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
<td></td>
</tr>
<tr>
<td>With dissemination of the NAGC standards to states</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>27.3% (3)</td>
<td>54.5% (6)</td>
<td></td>
</tr>
<tr>
<td>Work to change assumptions about gifted students making it on their own</td>
<td>18.2% (2)</td>
<td>54.5% (6)</td>
<td>27.3% (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Celebrities and advocates teachers' successful professional development efforts for gifted</td>
<td>9.1% (1)</td>
<td>72.3% (6)</td>
<td>54.5% (6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop trained teacher coaches</td>
<td>27.3% (3)</td>
<td>9.1% (1)</td>
<td>45.5% (5)</td>
<td>18.2% (2)</td>
<td></td>
</tr>
<tr>
<td>Increase access to gifted professional learning experiences invited by researchers</td>
<td>27.3% (3)</td>
<td>9.1% (1)</td>
<td>45.5% (5)</td>
<td>18.2% (2)</td>
<td></td>
</tr>
</tbody>
</table>

Note. Consensus of the group is indicated by rose tones and polarization by gray tones.
Table C4

Subgroup Ratings of the Importance of Factors

<table>
<thead>
<tr>
<th>Factor</th>
<th>No Judgment</th>
<th>Unimportant</th>
<th>Slightly Important</th>
<th>Important</th>
<th>Very Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal NCLB and special education mandates</td>
<td>Group SA</td>
<td>20% (1)</td>
<td>20% (1)</td>
<td>20% (1)</td>
<td>20% (1)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>80% (2)</td>
<td>80% (2)</td>
<td>80% (2)</td>
<td>80% (2)</td>
</tr>
<tr>
<td></td>
<td>Group GE</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
</tr>
<tr>
<td>Disparate state monitoring and/or mandates</td>
<td>Group SA</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
</tr>
<tr>
<td></td>
<td>Group GE</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
</tr>
<tr>
<td>Standardized assessments do not measure growth of all students</td>
<td>Group SA</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
</tr>
<tr>
<td></td>
<td>Group GE</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
</tr>
<tr>
<td>Influence of professional organizations</td>
<td>Group SA</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
</tr>
<tr>
<td></td>
<td>Group GE</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
</tr>
<tr>
<td>Community and parental pressure</td>
<td>Group SA</td>
<td>100% (5)</td>
<td>100% (5)</td>
<td>100% (5)</td>
<td>100% (5)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
</tr>
<tr>
<td></td>
<td>Group GE</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
</tr>
<tr>
<td>State requirements for gifted coursework or PD for teacher certification or license</td>
<td>Group SA</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td></td>
<td>Group GE</td>
<td>60% (2)</td>
<td>60% (2)</td>
<td>60% (2)</td>
<td>60% (2)</td>
</tr>
<tr>
<td>State and local professional learning standards</td>
<td>Group SA</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
</tr>
<tr>
<td></td>
<td>Group GE</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
</tr>
<tr>
<td>Competing or contradictory priorities</td>
<td>Group SA</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
</tr>
<tr>
<td></td>
<td>Group GE</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
</tr>
<tr>
<td>The scale of professional development required for successful implementation of new strategies</td>
<td>Group SA</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
</tr>
<tr>
<td></td>
<td>Group GE</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
</tr>
<tr>
<td>Time allocation</td>
<td>Group SA</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
</tr>
<tr>
<td></td>
<td>Group GE</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
</tr>
<tr>
<td>Belief that gifted specialist is solely responsible for gifted students' program</td>
<td>Group SA</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
</tr>
<tr>
<td></td>
<td>Group GE</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
</tr>
<tr>
<td>Principal preparation programs do not include gifted education</td>
<td>Group SA</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
</tr>
<tr>
<td></td>
<td>Group GE</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
</tr>
<tr>
<td>Narrowly focused professional development</td>
<td>Group SA</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
</tr>
<tr>
<td></td>
<td>Group GE</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
</tr>
<tr>
<td>Reliance on outside consultants to provide professional development</td>
<td>Group SA</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
</tr>
<tr>
<td></td>
<td>Group GE</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
<td>0% (1)</td>
</tr>
</tbody>
</table>
District commitment to professional learning of administrators related to teachers’ professional development

Group
SA
SD
GE

Method of identification

State funding for gifted education

Cost to provide job-embedded sustained professional development

Pressure to keep all teachers in classrooms all the time

Designated federal, state, and local funding for professional learning

Methods of identification

Gifted education is often not valued in schools

Misconceptions about giftedness

Administrators know a family with a gifted child

School cultural values that support professional learning

Assumption that gifted students will be successful

Community attitudes toward educational spending

Administrators access to NAGC standards

Community attitudes toward professional learning as gifted education

<table>
<thead>
<tr>
<th>District commitment</th>
<th>Professional Learning</th>
<th>Administrators’ Evaluations</th>
<th>Methods of Identification</th>
<th>State Funding</th>
<th>Cost to Provide</th>
<th>Pressure</th>
<th>Designated Funding</th>
<th>Methods</th>
<th>Gifted Education</th>
<th>Misconceptions</th>
<th>Administrators’ Knowledge</th>
<th>School Values</th>
<th>Assumptions</th>
<th>Community Spending</th>
<th>Administrators’ Access to Standards</th>
<th>Community Attitudes</th>
<th>Professional Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.2% (2)</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>33.3% (1)</td>
<td>18.2% (2)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td>Community attitudes toward teachers in general</td>
<td>Group</td>
<td>9.1% (1)</td>
<td>27.3% (1)</td>
<td>20% (1)</td>
<td>63.6% (8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>-------</td>
<td>----------</td>
<td>-----------</td>
<td>--------</td>
<td>---------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SA</td>
<td></td>
<td></td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
<td>66.6% (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PD</td>
<td></td>
<td>20% (1)</td>
<td></td>
<td></td>
<td>60% (5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Table C5

**Subgroup Ratings of the Desirability of Proposed Actions**

<table>
<thead>
<tr>
<th>Proposed Action</th>
<th>No Judgment</th>
<th>Very Undesirable</th>
<th>Undesirable</th>
<th>Desirable</th>
<th>Very Desirable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advocate for federal mandates related to gifted education.</td>
<td>Group SA</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>33.3% (3)</td>
<td>45.5% (5)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>66.6% (2)</td>
</tr>
<tr>
<td>Federal, state, and local adoption of assessment measuring growth of all students in all subjects</td>
<td>Group SA</td>
<td>9.1% (1)</td>
<td>27.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
</tr>
<tr>
<td>Mandates requiring coursework in gifted education for administrators</td>
<td>Group SA</td>
<td>18.2% (2)</td>
<td>18.2% (2)</td>
<td>33.3% (3)</td>
<td>36.4% (4)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
</tr>
<tr>
<td>State and local requirements for preparation and PD in gifted education for all general education teachers</td>
<td>Group SA</td>
<td>18.2% (2)</td>
<td>18.2% (2)</td>
<td>33.3% (3)</td>
<td>36.4% (4)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
</tr>
<tr>
<td>Changes in administrative preparation programs and licensure exams to include gifted education</td>
<td>Group SA</td>
<td>10.0% (1)</td>
<td>18.2% (2)</td>
<td>20.0% (2)</td>
<td>20.0% (2)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
</tr>
<tr>
<td>Provide administrators' expectations that new general education hires have preparation in gifted education</td>
<td>Group SA</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>20.0% (2)</td>
<td>10.0% (1)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
</tr>
<tr>
<td>Support district in meeting needs of struggling and advanced learners at the same time</td>
<td>Group SA</td>
<td>9.1% (1)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>36.4% (4)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
</tr>
<tr>
<td>Funding for professional development linked to outcomes in student learning</td>
<td>Group SA</td>
<td>18.2% (2)</td>
<td>36.4% (4)</td>
<td>33.3% (3)</td>
<td>27.3% (3)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
</tr>
<tr>
<td>Designated federal, state, and local funding for gifted education professional development</td>
<td>Group SA</td>
<td>18.2% (2)</td>
<td>18.2% (2)</td>
<td>33.3% (3)</td>
<td>36.4% (4)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
</tr>
<tr>
<td>Promote job-embedded professional development that does not require additional resources</td>
<td>Group SA</td>
<td>9.1% (1)</td>
<td>36.4% (4)</td>
<td>36.4% (4)</td>
<td>36.4% (4)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>33.3% (3)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
</tr>
<tr>
<td>Strategic planning model that maps gifted needs and priorities</td>
<td>Group SA</td>
<td>18.2% (2)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>36.4% (4)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
</tr>
<tr>
<td>Promote understanding of equity as it related to gifted education</td>
<td>Group SA</td>
<td>9.1% (1)</td>
<td>33.3% (3)</td>
<td>34.4% (4)</td>
<td>34.4% (4)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>33.3% (3)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
<td>66.6% (2)</td>
</tr>
<tr>
<td>Disseminate information to school administrators regarding gifted program and service delivery models and the efforts being made in the field to promote success to gifted education to under-represented populations of gifted students</td>
<td>Group SA</td>
<td>9.1% (1)</td>
<td>45.5% (5)</td>
<td>45.5% (5)</td>
<td>45.5% (5)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
</tr>
<tr>
<td>Establish federal, state, and district goals for professional learning in gifted education</td>
<td>Group SA</td>
<td>9.1% (1)</td>
<td>58.2% (2)</td>
<td>66.6% (2)</td>
<td>36.4% (4)</td>
</tr>
<tr>
<td></td>
<td>Group PD</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
<td>33.3% (3)</td>
</tr>
<tr>
<td>Build a supportive professional learning culture in schools</td>
<td>Group SA</td>
<td>PD</td>
<td>GE</td>
<td>9.1% (1)</td>
<td>27.5% (3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td>Promote the importance of student achievement of potential as a factor related to global competitiveness</td>
<td>Group SA</td>
<td>PD</td>
<td>GE</td>
<td>9.1% (2)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td>National Association for Gifted Children (NAGC) take on stronger lobbying efforts for awareness of “languishing” gifted students</td>
<td>Group SA</td>
<td>PD</td>
<td>GE</td>
<td>18.2% (3)</td>
<td>9.1% (1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>33.3% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td>Wider dissemination of the NAGC standards to administrators</td>
<td>Group SA</td>
<td>PD</td>
<td>GE</td>
<td>9.1% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td>Work to change assumptions about gifted students making it on their own</td>
<td>Group SA</td>
<td>PD</td>
<td>GE</td>
<td>9.1% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td>Celebrate and acknowledge teachers' successful differentiation efforts for gifted students</td>
<td>Group SA</td>
<td>PD</td>
<td>GE</td>
<td>9.1% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20% (1)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td>Develop trained teacher cadres</td>
<td>Group SA</td>
<td>PD</td>
<td>GE</td>
<td>27.3% (3)</td>
<td>66.6% (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60% (2)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td>Increase access to gifted professional learning experiences created by researchers</td>
<td>Group SA</td>
<td>PD</td>
<td>GE</td>
<td>18.2% (2)</td>
<td>66.6% (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>66.6% (2)</td>
<td>33.3% (1)</td>
</tr>
<tr>
<td>Proposed Action</td>
<td>Group</td>
<td>No Judgment</td>
<td>Definitely Unfeasible</td>
<td>Possibly Unfeasible</td>
<td>Certainly Feasible</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------</td>
<td>-------</td>
<td>-------------</td>
<td>-----------------------</td>
<td>--------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Support districts in meeting needs of struggling and advanced learners of the same time</td>
<td>SA / PD / GE</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
</tr>
<tr>
<td>Funding for professional development linked to outcomes in student learning</td>
<td>SA / PD / GE</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
</tr>
<tr>
<td>Designated federal, state, and local funding for gifted education professional development</td>
<td>SA / PD / GE</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
</tr>
<tr>
<td>Enhance job-embedded professional development that does not overlap additional resources</td>
<td>SA / PG / GE</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
</tr>
<tr>
<td>Strategic planning model that maps gifted needs and priorities</td>
<td>SA / PG / GE</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
</tr>
<tr>
<td>Promote understanding of equity as it relates to gifted education</td>
<td>SA / PG / GE</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
</tr>
<tr>
<td>Disseminate information to school administrators regarding gifted program and service delivery models and the efforts being made in the field to promote access to gifted education in under-represented populations of gifted learners</td>
<td>SA / PD / GE</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
</tr>
<tr>
<td>Establish federal, state, and district goals for professional learning in gifted education</td>
<td>SA / PD / GE</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
</tr>
</tbody>
</table>
Build a supportive professional learning culture in schools
- Promote the importance of student achievement of potential as a factor related to global competitiveness

National Association for Gifted Children (NAGC) take on stronger lobbying efforts for awareness of "giftedness" global students
- Wider dissemination of the NAGC standards to administrators

Work to change assumptions about gifted students making it on their own
- Celebrate and acknowledge teachers' successful differentiation efforts for gifted students

Develop trained teacher cadres
- Increase access to gifted professional learning experiences created by researchers
Appendix D

IRB Approval Documentation
REQUEST FOR APPROVAL OF RESEARCH, DEMONSTRATION OR RELATED ACTIVITIES INVOLVING HUMAN SUBJECTS

All material must be typed.

PROJECT TITLE: SCHOOL ADMINISTRATORS AND THE PROFESSIONAL DEVELOPMENT OF GENERAL EDUCATION TEACHERS IN GIFTED EDUCATION TOPICS: A DELPHI STUDY

CERTIFICATION STATEMENT:
In making this application, I/we certify that I/we have read and understand the University’s policies and procedures governing research, development, and related activities involving human subjects. I/we shall comply with the letter and spirit of these policies. I/we further acknowledge my/our obligation to (1) obtain written approval of significant deviations from the originally-approved protocol BEFORE making those deviations, and (2) report immediately all adverse effects of the study on the subjects to the Director of the Institutional Review Board, Seton Hall University, South Orange, NJ 07079.

**Please print or type out names of all researchers below signature. Use separate sheet of paper, if necessary.**

My signature indicates that I have reviewed the attached materials and consider them to meet IRB standards.

**Please print or type out name below signature**

The request for approval submitted by the above researcher(s) was considered by the IRB for Research Involving Human Subjects Research at the meeting of .

The application was approved by the Committee. Special conditions were not set by the IRB. (Any special conditions are described on the reverse side.)

**Please print or type out name below signature**

Seton Hall University 3/2005