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An Exploration of Identification of Leadership for Gifted Students

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AN EXPLORATION OF IDENTIFICATION OF LEADERSHIP FOR GIFTED STUDENTS

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ABSTRACT

Leadership has been designated a talent area in federal and state definitions of gifted students who require differentiated programs since the Marland Report came out in 1972, yet it remains the least discussed of the curricular areas for gifted students. The purpose of this study was to examine the perceptions and attitudes of administrators of gifted programs in Colorado and Idaho concerning identifying students gifted in leadership. Public K-12 school districts in Colorado and Idaho were surveyed using a researcher-created survey including questions targeting attitudes and twelve questions specific to leadership traits. Response rate was 51%. In general, respondents indicated it was possible to identify gifted student abilities in K-12 students and the two states agreed with each other in 89% of the leadership skills questioned. Colorado showed a philosophical preference in the nurture, or the developmental philosophy of leadership, over nature, or the inherent philosophy of the construct, whereas Idaho showed no preference. The results suggest that Leadership curriculum should be planned, implemented, and evaluated along a K -12 developmental continuum with multiple opportunities given for leadership development especially in programs for the gifted.

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CHAPTER I

The Nature and Purpose of the Study

"Leadership is action, not position"
Author unknown

Leadership has been designated a talent area in federal and state definitions of gifted students who require differentiated programs, since the Marland Report came out in 1972, yet it remains the least discussed of the curricular areas for these students in the literature, and it is not well defined (Karnes & Bean, 1990). Leadership is much more than being elected or appointed to a position. A survey reported in the U. S. News and World Report (2007) concluded "Americans have steadily lost confidence in their leaders since 2005" (¶ 1). In that poll seventy-seven percent of respondents agreed there is a leadership crisis in the country today. It is crucial that leadership development grow in importance in American schools. Educators, parents, and other concerned adults who are interested in the development of leadership in gifted youth can make a difference in the lives of students, but first they must identify gifted leadership potential in the students they target for programs.

The state of Colorado signed into legislation on July 1, 2007, a bill mandating the identification of gifted students in five areas: General or specific intellectual ability, specific academic aptitude, creative or productive thinking,

leadership abilities, and visual arts, performing arts, musical or psychomotor abilities (Colorado Department of Education [CDE], 2007). Prior to this time, since 1988 gifted education in Colorado was legislated as a voluntary program. The new mandate is consistent with the Marland report definition of giftedness published in 1972 that Congress passed as Public Law 91-230, section 806. Although the Marland report was written over thirty years ago, currently only 37 states have a mandate to identify gifted students (Davidson Institute, 2008). "Twenty-five states use 'gifted and talented' or some variation and can opt for their own definitions. Eighteen states have chosen to only use the term 'gifted' or some variation and not mention the work 'talented.' Finally, three states use the term 'high ability student'" (Education Commission of the States, 2004, p.1). Colorado is one of 16 states in the U.S. who have broadened their gifted identification requirements to include the non-academic identification area of leadership (see Appendix A for complete data). The recent addition of non-academic areas for gifted identification is not exclusive to Colorado alone. "There has been a shift from psychometric constructs of giftedness to psychological constructs, a shift from test-driven models to ones that focus on traits, aptitudes, and behaviors as defining giftedness" (Frasier & Passow, 1994, p. xi).

Although the Marland definition has been criticized as being limiting (Reis and Renzulli, 1982) and of promoting elitism (Feldman, 1979) Martinson (1975) reported that more than 80% of 204 experts polled for their reactions to

the Marland definition agreed with the selection of the categories of high intellectual ability, creative or productive thinking, specific academic aptitude, and ability in visual or performing arts. Approximately half of the experts agreed that social adeptness (leadership) and psychomotor ability should be included, but defining and assessing these constructs is not without difficulties.

The difficulties are hard to ignore. First, concepts such as “creative thinking” and “leadership ability” are imprecise. What are creativity and leadership and how are they reliably measured? Second, the definition used in the Marland Report does not include motivation or task commitment as an element of giftedness as Joseph Renzulli suggests (1983). Additional critics of the Marland definition argue that one of the key factors characterizing the work of gifted persons is the ability to be fully involved in a problem or area for an extended period of time (Davis & Rimm, 1994; Frasier & Passow, 1994; Karnes & Bean, 1996.) Third, some researchers have suggested that the definition tends to be misinterpreted and misused because educators treat each of the six areas of abilities as individual independent categories and ignore the inter-relationships among the categories (The Parliament of the Commonwealth of Australia [TPOTCOA], 1988).

Multi-faceted definitions have expanded the concept of giftedness, but have introduced concepts which are difficult to measure objectively.

> As the definitions of giftedness move from the precise and 'conservative' to the imprecise and 'liberal' there is less emphasis on objective measurement of performance and potential and more reliance on the judgment of

> individuals. 'Liberal' definitions introduce value judgments and the problem of subjectivity in measurement. (TPOTCOA, 1988, section 3.14).

Although the use of psychometric measurements has been criticized as being limiting, it is important to include the value of these devices. Richert et al (1982) note:

> Though often misused, IQ tests can add valuable information about the academic abilities on many gifted students…
>
> These tests have distinct uses at all three stages (of identification). In nomination, their utility is obvious for getting disadvantaged students into the talent pool. In the assessment stage, standardized IQ and achievement tests can be very helpful in matching ability and specific program options. At the evaluation stage, they can be useful in measuring progress in academic areas, if that is a program objective. (pp. 171-172).

According to Sternberg, Passow, Zhang et al, (2004) "Intelligence tests are among the most popular measures administered by psychologists…These tests are so widely used because they have an impressive record of reliability and validity that makes them a standard for other psychometric measures" (p. 56). One cannot argue against using IQ tests when used for their intended purposes. The problem arises when using IQ tests to try to identify abilities outside the intended objectives of the measures.

Sternberg (2007) identified an additional problem with identifying children as gifted. "Different cultures have different conceptions of what it means to be gifted. But in identifying children as gifted, we often use only our own conception, ignoring the cultural context in which the children grew up" (p.

160). “Finding a definition that adequately describes an elusive and multifaceted concept like giftedness has been an ongoing task since the field began” (Bonner, Jennings, Marbley, & Brown, 2008, p. 94).

The practice of identifying gifted and talented students using mainly test data and academic grades has limited the identification of students in non-academic areas such as leadership. The definition used in the Marland report (1972) and its multiple categories of giftedness can be interpreted subjectively and seek to include children whose exceptional abilities have not been developed. The difficulty with this approach is one of assessment. Even if one is able to operationalize the elements of giftedness into an assessment, “The measures typically are normed inadequately and lack information about reliability and validity” (Oakland, Falkenberg, & Oakland, 1996, p. 145). Plucker and Callahan (2008) concur that a valid means of assessing potential abilities are simply not available. Certainly, this is the case when educators are faced with identifying younger students who show potential in gifted leadership abilities.

Identifying gifted abilities in students in non-academic areas, therefore, presents a new problem for Colorado K-12 schools. Up until the mandate went into effect, Colorado districts that chose to identify students used mainly psychometric constructs to identify them and include them in programs designed to challenge students in the academic areas these constructs measured. Now Colorado districts must first find and then use assessment models appropriate to

the non-academic and still developing areas that are designed to focus mainly on traits, aptitudes, and behaviors. Educators who are charged with the responsibility of creating or maintaining programs for gifted students face a difficult task when they must decide what gifted students look like and what services schools should provide them. “Educational programming can only serve these students if they are identified and can only cater to their particular strengths if these strengths are specified…It is impossible to serve what you cannot define” (Plucker & Callahan, 2008, p. 281-282).

“A definition of giftedness is the foundation upon which an educational program for gifted children is built” (McClellan, 1985, p. 4). The specific abilities included in a definition of gifted abilities determine the identification criteria that are used to select students for a program and the educational services that will be provided for them. The guiding principles for the identification of the gifted cited by most experts in the field are the use of multiple criteria, early identification, continuous assessment, and the involvement of a variety of measurement formats that are designed to focus on the specific desired outcome. “Although there is great variability across these state’s definitions, many have been consistent in employing leadership capacity or leadership potential as an area of importance” (Bonner et al., 2008, p. 94). The correct selection of those abilities for leadership identification, therefore, is crucial to the identification process.

Purpose of the Study

The state of Colorado identifies gifted children as "…those persons between the ages of five and twenty-one whose abilities, talents, and potential for accomplishment are so outstanding that they require special provisions to meet their educational needs" (CDE, Identification section, ¶ 3). Now that Colorado requires an identification mandate, school districts will need to be accurate with their leadership abilities identification model to comply with identification requirements. For the state of Colorado, there currently are no specific state guidelines for identifying gifted students in non-academic strengths.

The primary purpose of this study was an exploration of the current attitudes and perceptions within the state of Colorado concerning identifying K-12 students gifted in leadership abilities. Colorado is a "local control" state meaning that many pre-kindergarten through 12th grade public education decisions -- on issues such as curriculum, personnel, school calendars, graduation requirements, and classroom policy -- are made by the 178 school district administrations and their school boards (CDE, 2007). The Colorado State Board of Education and Colorado Department of Education are in place to provide guidance and direction for the local districts on statewide educational issues and to act as a link to many Federal and State programs and services including the Exceptional Student Leadership Unit under which gifted services fall. "The Colorado State Board of Education promulgates the rules governing

the provisions for the statutes" (CDE, n.d., 22-26-104 Rules and regulations). The rules provide the administrative framework for schools and districts for the provision of services to gifted students. The districts are then free to apply the rules to their own individual needs as long as they remain within the framework of the statutes. This means that gifted identification attitudes and practices could be as diverse as the districts themselves.

Secondary purposes of this dissertation were to identify current attitudes and perceptions of gifted education administrators in identifying students gifted in leadership abilities in Idaho; a state chosen because like Colorado, Idaho is only one of eight states that has an identification mandate, includes leadership as an area of giftedness, and has a mandate to serve gifted students. The study then made recommendation to gifted program directors, teachers of gifted students, and gifted students.

Finally, the study explored philosophical models to check for potential correlations with the assessment method preferred by administrators of gifted programs, and explored what traits or characteristics of gifted leadership administrators of gifted programs believed are evidenced in gifted student leaders.

Problem Statement

The current environment of high-stakes testing and accountability in American education has forced schools to focus towards standards and benchmarks in academic content areas and away from what is considered non-

academic studies. One area that received little attention is the area of student leadership. “When we identify people, especially children, for giftedness, we often neglect what arguably is the most important kind of giftedness of all--giftedness for leadership” (Sternberg, 2005, p. 41). The current Colorado legislation mandates that school districts identify students with leadership abilities as part of their identification model. This initiative has led to an obvious need for establishing procedures or developing measures to identify students who evidence leadership potential. “There is an equally urgent need to document and evaluate the effectiveness of existing training programs to ensure that identified prospective leaders can be effectively trained to realize their potential” (Chan, 2003, p. 172).

Colorado defines leadership abilities as “The exceptional capability or potential to influence and empower people (e.g., social perceptiveness, visionary ability, communication skills, problem solving, inter and intra-personal skills and a sense of responsibility, etc.)” (CDE ECEA Rules, 12.01 (9) (d) (i) Definition). The inclusion of the words “exceptional capability” qualify leadership as a gifted category in Colorado but the addition of the word ‘potential’ hints at the difficulty of the task of measuring leadership abilities in still developing students.

The question of identifying leadership abilities in still developing students embodies much of the complexity of this problem. Addison states, “No standardized test of leadership will identify the leadership potential of gifted and

talented students" (1985, How Can Teachers Identify section, ¶ 1). As with other areas of giftedness, a combination of methods will need to be implemented to aid the teacher in identifying those who excel in this area and in determining individual strengths and weaknesses. The problem is further complicated when comparing leadership abilities between the similarities and differences of students who are elected into school leadership roles because of their popularity versus those who have gifted leadership abilities that reveal themselves in classrooms and other social interactions. The problem is even further confounded with the negative view of leadership held by some gifted students themselves. "Our experience with gifted youngsters who possess the potential to deal with complex realities indicates that these young people do not see themselves as leaders or do not wish to assume such positions" (Landau & Weissler, 1991, p. 681). This study looked at the difficulties that accompany identifying K-12 school students in the non-academic area of gifted leadership abilities.

Summary of Related Literature

In 1969, the Congress of the United States mandated a study by the U.S. Commissioner of Education to determine the extent to which the needs of gifted and talented children were being met. This report, known as the Marland Report (1972) "contains a definition of giftedness that has been and continues to be the one most widely adopted or adapted by state and local education agencies" (McClellan, 1985, ¶ 9). The Marland report defined gifted and talented:

> Gifted and talented are those identified by professionally qualified persons who, by virtue of outstanding abilities, are capable of high performance. These are children who require differential educational programs and/or services beyond those provided by the regular school program in order to realize their contribution to self and the society. (as cited in McClellan, 1985, ¶ 10).

With a focus on domain-specific abilities rather than general intelligence, "the Marland Report (1972) laid early groundwork for giftedness as a domain-specific phenomenon, a movement away from IQ or the 'g' model of general intellectual superiority" (Matthews & Foster, 2006, p.1). The Marland definition suggested that school districts consider a broader range of abilities and skills than was used previously.

Although the definition of giftedness has broadened in the past three decades, intellectual ability and academic aptitude still dominate the identification processes as well as determining programming.

> Psychometric identification models are widely used despite research findings that lead to characterizing giftedness as a complex, multifaceted phenomenon, requiring the use of a variety of objective and subjective techniques and procedures if it is to be effectively assessed. (Frasier & Passow, 1994, p. x).

The 1993 Report on National Excellence, a follow-up report to the Marland report of 1972 and developed by the United States Department of Education, stated the following:

> In one recent national survey, 73 percent of school districts indicated that they have adopted the Marland definition; few said that they use it to identify and serve any area of giftedness other than high general intelligence as measured on IQ and achievement tests. (Frasier & Passow, 1994, p. 12).

The ensuing government research reported that most teachers used mainly tests and teacher recommendations to admit students to gifted and talented programs. These psychometric constructs of giftedness have traditionally guided identification and programming. This practice ignores the research that students can be intelligent in different ways (National Commission on Excellence in Education, 1993). The Report's concept of giftedness applied to a minimum of three to five percent of the school population. This information has been received as unsatisfactory to some. "While state and local definitions display good intentions, the practices used to assess and identify students are often unsatisfactory" (TPOTCOA, 1998, section 3.24).

Another issue compounding the identification of gifted leadership abilities is that leadership is not a set of concrete personal qualities that are measurable and constant. The construct is abstract in nature and complicated in structure. "Leadership can be identified only in terms of the qualities needed within a well-defined environment…The assessment of leadership must go beyond the use of existing scales and surveys" (Oakland, Falkenberg, & Oakland, 1996, p. 138).

Gifted Identification in Colorado: A Brief History

In 1975, Congress enacted Public Law 94-142, The Education for all Handicapped Children Act. This Act, which was renamed Individuals with Disabilities Act (IDEA), established a federal mandate to serve children with

special education needs, but it did not include children with gifts and talents. In 1983, *A Nation at Risk* reported that scores of America's brightest students failed to compete with international counterparts. The report included policies and practices in gifted education, raising academic standards, and promoting appropriate curriculum for gifted learners. As a response, in 1986, Colorado Legislation established Legislation declaration 22-26-101 on July 1, 1986, that stated:

> The general assembly, recognizing the obligation of the state of Colorado to provide educational opportunities to students which will challenge them and enable them to lead fulfilling and productive lives, declares that the purpose of this article is to provide educational opportunities for students who are gifted and talented. The general assembly also recognizes that the needs of gifted and talented students are not often met in the regular classroom and thereby declares that the purpose of this article is to foster the development of gifted and talented educational services by authorizing the department of education to purchase educational services from private organizations, or to assist in the provision of educational services by private organizations. (Michie's Legal Resources, n.d.).

The legislation also made provision for funding requests for the education of secondary gifted students.

In 1988, Congress passed the Jacob Javits Gifted and Talented Students Education Act as part of the Reauthorization of the Elementary and Secondary Education Act. As a response, the Colorado Title 22 document 22-26-101 Legislative declaration was amended on July 1, 2007, to include students from underserved populations.

> The general assembly hereby finds and declares that traditional assessment methods currently used do not adequately identify some gifted children, including those who are economically disadvantaged, those who are from ethnic or cultural minorities, and those with disabilities; and that the state board, the department, and every administrative unit are encouraged to give the highest priority to the identification of such gifted children and to the development of educational programs that include such gifted children. (Michie's Legal Resources, n.d.).

By this time, gifted legislation was included in the Exceptional Children's Education Act, and by 2002, The No Child Left Behind Act (NCLB) was passed as the reauthorization of the Elementary and Secondary Education Act. In 2004, *A Nation Deceived: How Schools Hold Back America's Brightest Students*, a national research-based report on acceleration strategies for advanced learners, was established. Colorado again responded with establishing a mandate for an Advanced Learning Plan to be upheld for every identified gifted student and a broadening of its identification categories to include the non-academic areas first suggested in the Marland report. It was this new identification model that prompted this study.

Basic Assumptions about Giftedness

It is crucial to include at least a brief discussion of basic assumptions about giftedness in any study of gifted identification. The problem of deciding what criteria to use to identify giftedness is difficult to describe. Giftedness has traditionally been taken to mean intellectual giftedness, and the gifted have been identified primarily through psychometric assessments (Hob, 2008). Obviously, this posed a fundamental problem for any investigation of giftedness outside the

historical parameters. The Javits Grants Act has assembled twelve postulates for giftedness but is careful to note that these do not have the endorsement of any governmental agency. Frazier and Passow (1994) have assembled the postulates in their work on the paradigm shift that has been taking place in gifted education toward identifying talent potential. According to Frasier & Passow, these twelve postulates or assumptions are crucial to the understanding of the underlying critique of the traditional programs and processes that have guided identification procedures and guide thinking about new models or paradigms. This includes the expansion of giftedness from a measure of intelligence to a measure of abilities such as leadership.

1. There exists no single accepted "theory of giftedness."
2. Academic achievement is an important indicator of giftedness, but cannot be the sole determinant in identification procedures.
3. Cultures may differ in terms of those talents recognized and rewarded; no culture or population has a monopoly on any talent potential, whatever its nature.
4. The aptitudes, attributes, and characteristics that are associated with talent potential are culturally imbedded.
5. The talents of minority and economically disadvantaged students are not of a different order or of a lower standard.

6. The purpose of identification is to locate students who can then be provided with appropriately differentiated educational opportunities.

7. Screening, identification, and the consequent cultivation of talent potential can only be improved and enhanced if insights into the nature of talent potential and the contexts in which it is nurtured are understood.

8. The concept of "disadvantaged" has meaning only if it is understood, not in terms of deficiencies, but rather as differences.

9. The problems of under-representation of minority and economically disadvantaged gifted students are intrinsically related to the more general problems of education and schooling of these populations—the fact that these students are more likely to be in schools and classes that are segregated or racially imbalanced and that have poorer facilities, fewer instructional resources, larger classes, fewer programs for the gifted, more inexperienced teachers, and other factors that contribute to limited or unequal educational opportunities.

10. Since decisions about giftedness in children are never more than predictions, wide nets should be thrown in the early stages of selection to increase the power of those predictions.

11. The concept that talent potential is culturally imbedded and impacted by environmental factors applies to all populations. Focusing on improving talent identification and development in a particular target

population could well lead to better insights about talent identification and its nature more generally.

12. Valid assessment procedures and strategies that would more effectively identify talent potential of minority disadvantaged populations must deal with both the actual and perceived problems of traditional methods. They must encourage and support the efforts of various minority groups to examine the concept of giftedness within their own cultural and environmental contexts and provide the basis for recognizing talents, without apologies for differences, where these exist, in their expression and performance (Frasier & Passow, 1994, p. ix).

Rationale of the Study

With the diversity in opinion and research on how to identify students gifted with leadership abilities, and the current questions of reliability and validity of gifted leadership assessments, the state of Colorado faces a difficult task in providing leadership to its administrative units in suggesting effective identification criteria in the area of gifted leadership. Because Colorado is a state of local control, there is a fine line drawn between a state mandate to find and identify students gifted in leadership abilities and state-recommended criteria as to how that identification is to be made. Through the use of the survey process, this study attempted to explore the current attitudes and perceptions of administrators of gifted students in identifying students gifted leadership abilities in Colorado and Idaho, and then to identify philosophical models that

drive the identification criteria in these experts. The study gathered data on what characteristics, traits or behaviors administrators of gifted students programs perceived to be important in establishing criteria for gifted leadership identification. The study then looked at the assessment preference in identifying gifted leadership abilities in K-12 students and compared the identification practices of Idaho, which has similar legislation and mandate in effect since 1993 to Colorado with its identification definition change in 2007. Through the analysis of leadership theories, descriptive statistics were applied to identify philosophical factors, or mental models, that may provide obstacles in the identification of students gifted with leadership abilities. Finally, the results of this study were used to recommend to the Colorado Exceptional Student Leadership Unit suggestions for district coordinators, teachers of gifted students, and gifted students themselves.

Research Questions

In order to provide guidelines for identifying students in the area of gifted leadership abilities, some basic questions were addressed.

1. What were the attitudes and perceptions of administrators of gifted student programs in K-12 school districts in Colorado in the identification of students gifted in leadership abilities?
2. What were the attitudes and perceptions of administrators of gifted student programs in K-12 school districts in Idaho in the identification of students gifted in leadership abilities?

3. Were there significant differences in the attitudes and perceptions in the identification of students gifted in leadership abilities in administrators of gifted student programs in Colorado and Idaho?

4. Were there significant correlations between foundational leadership philosophies and leadership assessment preference used in identifying students gifted in leadership abilities?

5. Were there significant relationships between foundational leadership philosophies and perceptions of gifted leadership abilities?

Methodology

Survey methodology was chosen for this research for the purpose of gaining understanding of the perceptions of gifted education professionals experienced in the application of gifted methodology and identification towards the identification of gifted leadership abilities in K-12 students. The survey sought to establish a baseline of expertise for comparison of administrators of gifted programs in Idaho and Colorado. In an effort to determine a comparison of perceptions in Colorado to those who have had the mandate and practice for more time, a survey was sent to gifted program directors or the contact person/lead teacher for the district gifted program in all 178 districts and administrative units in the state of Colorado and program directors or contact person/lead teacher in all 115 districts and administrative units in the state of Idaho. By using comparative analysis the survey identified what characteristics,

traits or behaviors educators of gifted students perceived to be important in establishing criteria for gifted leadership identification. A Pearson correlation statistic was applied to discern what factors proved to be philosophical or mental models that created obstacles or provided impetus toward the identification of students with gifted leadership abilities. Using the results, a recommendation was made to state administrative unit coordinators, gifted educators, and gifted students in the identification of students gifted in leadership abilities. This study was supported by the Colorado State Board of Education.

Definition of Terms

In order to provide consensus, this section offers a list of definitions of terms.

Identification: "The term 'identification' is generally applied to procedures used to screen gifted students from among the wider population or to select them for specialized programs. Such procedures can be broadly classified as 'objective' or 'subjective'." (The Parliament Of The Commonwealth Of Australia, 1988, Definition section, ¶ 2).

The five identification definitions for Colorado based on the Marland Report of 1972:

> General or Specific Intellectual ability: Exceptional capability or potential recognized through cognitive processes (e.g., memory, reasoning, rate of learning, spatial reasoning, ability to find and solve

problems, ability to manipulate abstract ideas and make connections, etc.). (Colorado Department of Education ECEA Rules, 12.01 (9) (a) (i) Definition).

Specific Academic Aptitude: Exceptional capability or potential in an academic content area(s) (e.g., a strong knowledge base or the ability to ask insightful, pertinent questions within the discipline, etc.). (Colorado Department of Education ECEA Rules, 12.01 (9) (b) (i) Definition).

Creative or Productive Thinking: Exceptional capability or potential in mental processes (e.g., critical thinking, creative problem solving, humor, independent/original thinking, and/or products, etc.). (Colorado Department of Education ECEA Rules, 12.01 (9) (c) (i) Definition).

Leadership Abilities: The exceptional capability or potential to influence and empower people (e.g., social perceptiveness, visionary ability, communication skills, problem solving, inter and intra-personal skills and a sense of responsibility, etc.). (Colorado Department of Education ECEA Rules, 12.01 (9) (d) (i) Definition).

Visual Arts, Performing Arts, Musical or Psychomotor Abilities: Exceptional capabilities or potential in talent areas (e.g., art, drama, music, dance, body awareness, coordination and physical skills, etc.). (Colorado Department of Education ECEA Rules, 12.01 (9) (e) (i) Definition).

Authentic assessment: A form of assessment in which students are asked to perform real-world tasks that demonstrate meaningful application of essential knowledge and skills (Moon, 2008, p.53).

Construct: An abstract theoretical variable that is invented to explain some phenomenon or mental characteristic constructed or formulated from a variety of behaviors, but which are presumed to have educational or psychological meaning (Young, 1996).

Formal Assessment: Used in this study as a published assessment tool with established reliability and validity indicators.

Intelligence Quotient (IQ): A numerical representation of intelligence correlated to age originally noted by Lewis Termin (Minton, 1988).

Observation: A method of assessment based on systematic observation using established criteria (Stiggins, 2005).

Objective Procedures: Measurable assessments that may include group and individual intelligence tests, achievement tests, specific aptitude tests and creativity tests (Stiggins, 2005).

Psychometric constructs: The quantitative measurement of mental characteristics using the Intelligence Quotient (Minton, 1988).

Rating scales: Assessment indicators with a range.

Subjective Procedures: Assessments based on personal opinion and non-objective observation that may include teacher nomination, parent nomination, peer nomination and self-nomination (Moon, 2008).

Limitations of the Study

Most of the literature and the assessments that were developed to identify gifted leadership in children and youth were written during the decades of the 1970s to the early 1990s. Yet there has been a recent resurgence of the interest in leadership development. The few studies written within the last decade were done mostly in countries other than the United States: mainly China and Australia. While these studies are valuable, they are limited in the generalizations that can be made to the U.S. population. During the thirty-plus year gap in leadership studies for children, a plethora of leadership literature has

flooded the American market but focuses on adults and business. This makes appropriate literature sparse and limiting; therefore, some literature reviewed in this study was written prior to ten years ago in order to present accuracy in defining its construct. In addition, most of the assessments developed to measure leadership that were reviewed here were created more than ten years ago.

Organization of the Dissertation

This dissertation is organized into five chapters. Chapter one includes the introduction to the study, the statement of the problem, a summary of the literature, important definitions to the paper, and a brief discussion of the rationale and methodology.

Chapter two provides a literature review related to defining leadership and the attributes of gifted leadership. It includes a brief overview of the history of gifted identification, a mention of cultural considerations, the problems of gifted identification, and a brief summary of leadership assessments.

Chapter three describes the survey methodology used in the research. It includes the discussion of the data collection method and the organization of leadership constructs included within the survey instrument.

Reports of the findings and analysis of the data are included in chapter four. To address the research questions, descriptive and correlation statistics were applied to set a baseline of expertise level in the respondents.

Chapter five includes a summary of the results and implications of the findings and conclusion based on the data. Implications of the results are discussed and an evaluation of the limitations of the methodology is included. Finally, recommendations for the state of Colorado district coordinators, gifted educators, and gifted students, and suggestions for further study are made at the end of the chapter.

CHAPTER II

Review of the Literature

The review of the literature included in this study followed the format of the study's research questions and focused on the problems with defining leadership and gifted leadership identification. The review discussed the transition of leadership theory from developing skills and traits to the belief that true leadership abilities manifest themselves in situational contexts: Theories that must be understood prior to the gifted leadership identification process. The literature established a background for understanding the varied perceptions exposed in the survey instrument and provided a context for this study. This set up the need to find an effective measure for identifying gifted leadership abilities that use a body of evidence with consistent reliable and valid measures and indicators. In response, a brief summary critique of leadership assessments appropriate for school-aged students was provided based mainly on the work of Oakland, Falkenberg, and Oakland (1996).

Historical Perspective

Identifying gifted students in the United States has been marked historically by several major events. Leadership has played a role in each event but literature is sparse on this key element of giftedness for students. The literature in this period does not provide an abundance of information

specifically on the identification of gifted leadership abilities in young students but sets a theoretical framework for the study.

Identifying students as gifted began in the 1920s when Lewis M. Terman adopted Stern's "mental quotient" to produce what is probably the best-known psychological concept called the Intelligence Quotient (IQ). Terman played a key role in developing intelligence tests for the United States Army, and in collaboration with a committee of psychologists who had worked on the Army tests he developed the "National Intelligence Tests" for grades three to eight. Terman viewed the widespread adoption of tests in schools as a reflection of how testing could be of use to American society and felt “the highest purpose that testing could serve was the identification of intellectually gifted children– the potential leaders of society” (Terman as cited in Minton, 1988, p. 78).

The next major landmark in gifted identification was marked when The National Defense Education Act (NDEA) was passed by Congress in 1958 in response to the Sputnik launch by the Soviet Union. As a reaction, the NDEA pushed educators to identify gifted students in the areas of math and science in their schools. These students were specially targeted to bolster science, mathematics, and technology in public education and provide leadership to the national space program.

The impact of the NDEA was evident in schools for years after. This prompted a study initiated by the U.S. Department of Education in 1969 on how effective education was with meeting the needs of gifted students. The Marland

Report, completed in 1972, for the first time presented a general definition of giftedness, and urged school districts to adopt it. The report also allowed students to show high ability on talents and skills not measurable by Terman's intelligence test. One of these ability areas is leadership.

In the past 30 years, research has challenged the long-held view of intelligence as a fixed, narrow concept measurable by any one test. It is now understood that intelligence is complex, takes many forms, and therefore requires the use of many criteria to measure it. This understanding has led educators to question traditional definitions of intelligence and current assessment practices and procedures. The Report on National Excellence (1993) was designed as a follow up to the Marland report and concluded "Performance on a single test is no longer a viable way to identify the myriad talents that students possess" (How States and Districts Identify section, ¶ 3).

There is one federal law with respect to gifted education. The Jacob K. Javits Gifted & Talented Student Education Act of 1988 was renewed as part of the Elementary and Secondary Education Act in 1994 and again as part of the No Child Left Behind act of 2001. The purpose of this act is to carry out a coordinated program of scientifically based research, demonstration projects, innovative strategies, and similar activities designed to build and enhance the ability of elementary and secondary schools to meet the special education needs of gifted and talented students. The major emphasis of the program is on serving students traditionally underrepresented in gifted and talented programs,

particularly economically disadvantaged, limited English proficient (LEP), and disabled students, to help reduce the serious gap in achievement among certain groups of students at the highest levels of achievement.

Defining Leadership

The emphasis of this overview was intended to provide a framework for the investigation of the impact of theories on leadership identification and development and how these theories impacted literature on studies for children and youth. The following sections progress from a basic definition of leadership through major theories impacting children and youth into defining what constitutes gifted leadership. These theories impact mental models that frame identification preferences and obstacles in identification preferences. The structure of the review set up our survey instrument which had at its heart definable constructs of gifted leadership abilities.

Literature on leadership is numerous but most is adult-oriented and found in non-trade publications. What does exist for student leadership is inconsistent and non-standard in measurement. The confusion and complexity come from varied definitions and explanations of how to define the construct of gifted leadership behavior. Early research tends to define leadership based upon either how leadership is organized as a construct of society, or on the unique individual traits and styles evident in emergent leaders (Addison, 1985). Early researchers such as DeHaan and Havighurst (1961) used attributes such as

persistence, ambition, and dominance to describe leadership abilities of the gifted.

The definition adopted by the U.S. Department of Health, Education, and Welfare's Office of Gifted and Talented in 1972 gives insight into the multiple facets of the definition of leadership ability:

> Leadership can be defined as the ability to direct individuals or groups to a common decision or action. Students who demonstrate giftedness in leadership ability use group skills and negotiate in difficult situations. Many teachers recognize leadership through a student's keen interest and skill in problem-solving. Leadership characteristics include self-confidence, responsibility, cooperation, a tendency to dominate, and the ability to adapt readily to new situations. These students can be identified through instruments such as the Fundamental Interpersonal Relations Orientation Behavior (FIRO-B). In addition, their demonstrated leadership can be useful, as when they serve as captains of athletic or debate teams -- or as instigators of behind-the-scenes action in the classroom, which may be socially desirable or undesirable. (CEC, 1990, Who Are Gifted Children? section, ¶ 7).

The federal definition conceptualizes giftedness as extraordinary intellectual and academic ability, and high performance capability in creativity, the arts, and leadership. This is in direct opposition to what is really happening in our nation's schools. "The practice of identifying gifted students in the schools typically centers on assessing intellectual and academic abilities. Rarely do schools identify the other areas of giftedness" (Jarosewich, Pfeiffer, & Morris, 2002, p. 322).

Sisk, Gilbert, and Gosch (1991) observed that "one finds about as many definitions of leadership as there are persons writing about the concept of

leadership" (p. 491). Defining leadership is further complicated by the difficulty of determining who is a leader and when an act of leadership has occurred. According to Karnes and Bean, "leadership is often a range of experiences in the life of a person, which suggests the changing nature of the elusive concept" (1996, p. 2). Add to this the various theories of leadership and one begins to see the problem of defining leadership in still developing young students.

An examination of existing literature on leadership and its connection to gifted and talented youth reveals several specific studies. One such study, the research of Roach et al. (1999) is known as "the only study addressing the long-term development of youth leadership and its relationship with adult leadership. This is of special importance because Roach et al. noted that theories of adult leadership tend to focus on individual abilities whereas theories of youth leadership are primarily situational" (as cited in Matthews, 2006, p. 94). An examination of the various theories, therefore, is crucial to understand how gifted leadership abilities manifest in still developing young students.

Leadership Theories

There are several distinct phases of theories of leadership, and identification of leadership abilities is dependent upon the theoretical basis of the identifier. The theories are influenced by the belief in the nature, or the inherent origin of leadership giftedness, versus nurture, or the environmental influence of gifted leadership. Although there are more theories than those

mentioned here, those included in this study are the ones with the most application to the identification and development of children and youth.

Trait theory

The original concept of leadership, what is called *trait theory,* can be traced to early ideas of Aristotle who believed a person was born with leadership abilities and is based on the assumption that leaders possessed universal characteristics that made them leaders. This belief shifted over time to include the impact of situations on leadership but has shifted back to reemphasize the critical role of traits identified in effective leadership (Northouse, 2004). These traits (or characteristics) of leadership can be viewed as objectives or competencies for a leader. Although the research studies were not held using children or youth as their study population, it is generally accepted in research that these effective leadership traits persist in both youth and adult populations (Northouse, 2004). However, Northouse (2004) disagrees in the purpose of using traits for development and training, but not for identification.

> A final criticism of the trait approach is that it is not a useful approach for training and development for leadership. Even if definitive traits could be identified, teaching new traits is not an easy process because traits are not easily changed. For example, it is not reasonable to send managers to a training program to raise their IQ or to train them to become introverted or extroverted people. The point is that traits are relatively fixed psychological structures, and this limits the value of teaching and leadership training. (p. 24).

Stodgill contributed to our understanding of trait theory with two major surveys. His first one, completed in 1948, identified a group of important

leadership traits that were related to how individuals in various groups became leaders. “His results showed that the average individual in the leadership role is different from an average group member in the following ways: (a) intelligence, (b) alertness, (c) insight, (d) responsibility, (e) initiative, (f) persistence, (g) self-confidence, and (h) sociability” (Stodgill as cited in Northouse, 2004, p. 16). The findings of Stodgill suggest that an individual does not become a leader solely because of the traits he or she possesses but rather the relative nature of the traits to the situations in which the leader is functioning.

Stodgill’s second survey, published in 1974, compared his findings with his first survey. He concluded that “both personality and situational factors were determinants of leadership” (Stodgill as cited in Northouse, 2004, p. 17). Stodgill amended his list of traits in his second survey to include ten traits:

1. Drive for responsibility and task completion.
2. Vigor and persistence in pursuit of goals.
3. Venturesomeness and originality in problem solving.
4. Drive to exercise initiative in social situations.
5. Self-confidence and sense of personal identity.
6. Willingness to accept consequences of decision and action.
7. Readiness to absorb interpersonal stress.
8. Willingness to tolerate frustration and delay.
9. Ability to influence other persons’ behavior.

10. Capacity to structure social interaction systems to the purpose at hand. (Stodgill as cited in Northouse, 2004, p. 17).

Researchers of the trait theory of leadership present us with many varied lists, but central to the lists are five major traits: intelligence, self-confidence, determination, integrity, and sociability (Northouse, 2004).

Northouse (2004) lists the strengths of trait theory for use in identifying effective leadership as being intuitively appealing, having a century of research behind it, focusing on the leader and not the followers, and it provides benchmarks of an effective leader. Northouse also presents the major criticisms of trait theory for use in identifying effective leadership as its failure to delimit a definitive list, its failure to take situations into account, the fact that it has resulted in highly subjective determinations of what is most important, and that it is not a useful approach for training and development for leadership.

David McClelland (1976), a Harvard-based researcher interested in the psychology of power and achievement, saw leadership skills not so much as a set of traits but as a pattern of motives. He claimed that successful leaders tend to have a high need for power, a low need for affiliation, and a high level of self-control. During the process of defining a pattern of motives (certain skills) the researcher will refer to the leadership skills as the actions effective leaders demonstrate on a consistent basis. McClelland claims it is the consistency of behavioral patterns that ultimately define the effectiveness of the leader (1976).

Style theory

Leadership style theory was first identified based on the work of Lewin, Lippen and White in 1939. The style approach focuses exclusively on what leaders do and how they act. “The style approach expands the study of leadership to include the actions of leaders toward subordinates in various contexts” (Northouse, 2004, p. 65). Researchers of the style approach determined that leadership is composed essentially of task behaviors and relationship behaviors (Bolman & Deal, 1997; Karnes & Bean, 1996; Kouzes & Posner, 1995). These styles and additional leadership styles added in later years by other researchers depend heavily on motivation.

Part of the difficulty in determining leadership abilities is in applying the various categories of leadership. Howard Gardner (1996) believes in multiple areas of giftedness and calls them multiple intelligences. Although he does not include leadership as a category of ‘multiple intelligence’ he has written multiple books on the subject of leadership. Gardner describes leadership “styles” in terms of the *person* as being ordinary, innovative, or visionary. He defines a leader as "an individual (or, rarely, a set of individuals) who significantly affects the thoughts, feelings, and/or behaviors of a significant number of individuals” (1996, p. 6).

Northouse (2004) lists the major strength of the style approach to leadership as being the impetus behind a major shift in the general focus of leadership traits in the leader to the behaviors of the leader in various situations.

Additional strengths are the wide availability of research to validate this approach, the importance of viewing effective leadership from both a task and relationship point of view, and the heuristic nature of the approach giving the advantage of helping the leader see needed changes within. Criticisms of the style approach to leadership are given by Northouse (2004) and include the fact that it has not adequately shown how leaders' styles are associated with performance outcomes and the lack of an effective universal style. A final criticism is the implication that the most effective leadership style is high-task and high-relationship and the research proves that a high task manager may not be the most effective leader in all situations.

Situational approach theory

A third phase of leadership theory development recognizes the importance of the influence of leaders in various situations. "These ideas initiated the connection between traits/attributes and behavior/performance" (Karnes & Bean, 1996, p. 2) and considered leadership as being a changeable entity. "The basic premise of the theory is that different situations demand different kinds of leadership" (Northouse, 2004, p. 87). This means that an effective leader requires an individual to adapt to the demands of different situations.

Situational theory consists of both a directive and a supportive dimension and that an effective leader applies the dimensions differently as needed. "In brief, the essence of situational leadership demands that a leader match his or

her style to the competence and commitment of the subordinates" (Northouse, 2004, p. 88). Leadership is also viewed as an interaction between personal qualities and environmental resources and needs (Yukl, 1989). Yukl agrees with the theory that defines leadership as being situational where different situations are assumed to require different leadership traits or skills. For this type of leadership to be effective, a detailed review of the needs or resources is needed prior to the selection of a leader. The theory states that a situational leader can be identified "only in terms of the qualities needed within a well-defined environment" (Oakland, Falkenberg, & Oakland, 1996, p. 138).Strengths consist of the credibility of the style to work effectively in practice, the fact that it is practical, it is prescriptive in nature, it emphasizes flexibility, and it reminds leaders to treat each subordinate differently. Weaknesses of the situational theory is its lack of research support, the ambiguity of how it works, how it conceptualizes commitment in the process, the dichotomies in research towards what combinations of dimensions work in what situations, and how it fails to account for how certain demographic characteristics influence the leader-subordinate prescriptions of the model (Northouse, 2004). Its subjective nature makes situational leadership theory difficult to train in a still developing young student.

Leadership as influence

The past two decades have expanded on the skills approach and has spawned thinking that leadership is transactional or transformational. This

theory focuses on the way leaders motivate or influence their followers. Addison expands on the idea of leadership as influence by stating,

> Leadership is the ability to influence the activities of an individual or group toward the achievement of a goal. The definition has evolved from Aristotle's original idea of a leader being a born leader or simply 'one who leads' to a more complex view of how a person exerts influence. (1985, p. 1).

Consistent with this definition, the Colorado Department of Education defines Leadership Abilities as "the exceptional capability or potential to influence and empower people (e.g., social perceptiveness, visionary ability, communication skills, problem solving, inter and intra-personal skills and a sense of responsibility, etc.)" (ECEA Rules, 12.01 (9) (d) (i) Definition). Expanding on this idea further, the Council of Exceptional Children (CEC) offers this definition of gifted leadership:

> Leadership can be defined as the ability to direct individuals or groups to a common decision or action. Students who demonstrate giftedness in leadership ability use group skills and negotiate in difficult situations. Many teachers recognize leadership through a student's keen interest and skill in problem solving. Leadership characteristics include self-confidence, responsibility, cooperation, a tendency to dominate, and the ability to adapt readily to new situations. (CEC, 2008, p.1).

Skills theory

The skills approach differs from the trait approach in that it shifts from focusing on personality characteristics of the leader to an emphasis on skills and abilities that can be learned and developed. It is liked by most modern researchers who believe gifted and talented students can be helped to understand

these skills and can improve upon them through practice (Davis & Rimm, 1998). The seminal study on the skills approach was published in the *Harvard Business Review* by Robert Katz in 1955. “Katz’s approach was an attempt to transcend the trait problem by addressing leadership as a set of developable skills” (Northouse, 2004, p. 35). Renewed interest in the skills approach has spawned a multitude of studies and skills-based programs, and most of the modern youth leadership programs are based on this premise.

The skills approach focuses on three basic personal skills that Katz labeled as technical, human, and conceptual. Technical skill is having knowledge about and being proficient in a specific type of work or activity. Human skill is having knowledge about and being able to work with people whereas conceptual skills are abilities to work with ideas and concepts. “The model is characterized as a capability model because it examines the relationship between a leader’s knowledge and skills…and the leader’s performance” (Northouse, 2004, p. 39).

The strengths of the skills approach make this approach most effective for student leadership. First, the approach is leader-centered and stresses the importance of developing particular leadership skills. Second, the skills approach is available to everyone and can be learned or developed. Third, this approach provides an expansive view of leadership that incorporates a wide variety of components. Finally, it provides a structure that is consistent with the curricula of most leadership education programs.

There are four major criticisms of the skills approach noted by Northouse (2004). First, the breadth seems to extend beyond the boundaries of leadership which makes it more general and less precise in explaining leadership performance. Second, the skills approach does not explain how the variations in social judgment skills and problem-solving skills affect performance. Third, although the skills approach claims not to be a trait model, a major component in the model includes individual attributes that are trait-like. A final criticism of the skills approach is that it was constructed for a specific population, the military, and not enough research has been done since to prove it can be generalized to other populations.

In spite of its limitations, Kouzes & Posner (1996) and Lester (2008) agree with the skill theory and that effective leaders possess a set of observable, learnable practices that can change over time. These skills can be developed and nurtured. In fact, Kouzes and Posner, and Lester all posit that exposure to leadership opportunities is the best way to develop these skills. The application of leadership skills to student opportunities in students identified with leadership potential, therefore, shows the greatest potential for student leadership development and growth.

The attributes of leadership are difficult enough to identify as absolutes, but when do these behaviors become *gifted behaviors?* What constitutes *gifted leadership behaviors?* The answers to these questions get lost in the complexity of the very nature of the issue of defining the term ‘gifted.’

Gifted Leadership

While no single best definition of leadership exists, teachers working with gifted and talented students may use broadened notions of leadership to identify the strengths and weaknesses of students as the framework for an intervention program (Addison, 1985). Hagen (1980) observes that "Inferences about giftedness will be accurate to the extent that the characteristics or behaviors we choose to observe are relevant to the construct and are validly and reliably appraised" (p. 1). She posits developing a clear statement of the behaviors that exemplify the giftedness construct.

According to Dr Murray Print (1988) Senior Lecturer in Education of the Western Australian College of Advanced Education, “the various definitions of giftedness range from specific, precise, hard data definitions based on percentage scores or IQs to vague, generally-worded concepts emphasizing student behavior or even potential ability” (1988, section 3.2). Joseph Renzulli (1986) states that gifted behavior “reflects an interaction among three basic clusters of human traits: above-average general and/or specific abilities, high levels of task commitment (motivation), and high levels of creativity” (p. 6). According to Renzulli, gifted and talented children are those who possess or are capable of developing this composite of traits and applying them to any potentially valuable area of human performance. “Superior ability without the spark of creativity or the will to persevere is unlikely to provide a high level of performance in any area” (Renzulli, 1986, p. 19).

Matthews and Foster (2006) use neuroscience and cognitive psychology to provide insights into what it means for children and youth to display outstanding talents. They offer a counter viewpoint that suggests the need to develop a new definition for gifted students. They state, "The term 'gifted' connotes a mature power rather than a developing ability and, therefore, is antithetic to recent research findings about children" (p. 1). Plucker (2008) sums up the controversy with his thinking:

> …the emergence and popularity (of an expanding definition of giftedness) is a testament to shifting values with regard to giftedness. Although the field has achieved no single consensus (nor is one likely or even desirable), it is clear that a greater variety of abilities now comprise giftedness and, therefore, so do a greater diversity of independent of increased dedication to providing equal opportunity to gifted education for underrepresented groups, or of a greater appreciation for diverse abilities in the professional world. (p. 283).

Such trends are evident in the federal definition as found in the Jacob K. Javitz Gifted and Talented education act (U.S. Department of Education, 1993) and mirror the thinking that giftedness should include the element of potential.

> Children and youth with outstanding talent perform or show the potential for performing at remarkably high levels of accomplishment when compared with others of their age, experience, or environment. These children and youth exhibit high performance capability in intellectual, creative, and/or artistic areas, possess an unusual leadership capacity, or excel in specific academic fields. They require services or activities not ordinarily provided by the schools. (NAGC, 2008, p.1).

Tannenbaum (1983) reports that a correlation exists between the exhibition of leadership skills and general intelligence. Karnes and Bean (1996) agree that much of the research on leadership and giftedness suggests a positive

relationship between the two concepts. “Many parallels exist between the characteristics used to define an effective leader and the characteristics used to describe a gifted individual” (p. 3). They add that most researchers in the field of gifted leadership agree that effective leaders and gifted students are highly verbal, socially sensitive, visionary, problem-solvers, critical thinkers, initiators, responsible, and flexible. The addition of creativity is debated by researchers who have studied the relationship between creativity and leadership and have found no strong correlation existing between the two (Frasier & Passow, 1994).

According to Karen Rogers (2002) to be identified as gifted or talented in the leadership domain of giftedness requires recognition from peers and adults. “Thus far, researchers have not discovered a valid and reliable written test for identifying giftedness in leadership” (p. 25). She continues that identification in leadership abilities is fairly subjective.

The characteristics and styles of gifted leadership are multidimensional. Plowman (1982) itemizes six aspects of leadership which could be categorized as leadership personality traits in the form of adjectives that include charismatic, intuitive, generative, analytic, evaluative, and synergistic. Plowman also reports 16 traits of leadership that were presented at the 1980 California Association of the Gifted Annual Conference.

1. Assertive decision making.
2. Altruistic.

3. Persuasive/Innovator.
4. Sensitive to the needs of others.
5. Ability to be a facilitator.
6. Goal-oriented.
7. Strong communication skills.
8. Integrity.
9. Organizational ability.
10. Resourceful.
11. Risk-taker.
12. Charismatic.
13. Competent.
14. Persistent (hangs in there).
15. Accepts responsibility.
16. Creative. (Plowman, 1981, p. 14).

A survey of gifted students initiated by Karnes and Bean (1995) reports student answers to the questions of what constitutes gifted leadership. “Although some of the elementary age students refer to leadership as power, authority and control, the majority of students defined leadership in positive terms” (p. 26). The responses are many and varied and in general are consistent with the concept that leadership is a multidimensional concept. Karnes and Bean have also found that “gifted students could be characterized as visionary leaders,

whereas non-gifted students seemed to be organizational leaders" (1996, Relationship Between Leadership and Giftedness section, ¶ 2).

According to Sternberg (2005) leadership is demonstrated by evidence of advanced level on performance assessments or the ninety-fifth percentile and above on standardized leadership tests—consistent with most psychometric constructs of leadership. "Leadership involves both skills and attitudes. The skills are developing competencies and expertise based on how well one can execute certain functions of leadership" (p. 37). An earlier work by Sternberg and Davidson (1986) states that one of the hallmarks of giftedness is flexibility and efficiency in dealing with novel situations, characteristics that are consistent with other research on what constitutes good leadership (Renzulli, 1983; Addison, 1985; Davis & Rimm, 1994; Frasier & Passow, 1994).

Expressing the thought that leadership is an active developmental process, Stodgill (1974) who reviewed 124 personality factors thought to be associated with leadership, concluded "Leadership is found to be an active process and not merely the result of a combination of traits" (as reported in Sisk, 1985, p. 48). Elaborating on the effectiveness of leadership programs used in leadership development, Sisk (1985) concludes that "The ability to evaluate one's self, situations, and the interrelation of situations and people is essential for students gifted in leadership" (p. 50). This emphasizes the need for students to be involved in experiences and opportunities that will allow them to take risks that

will help them to develop their leadership abilities (Sisk, 1985). Sisk expresses the necessary abilities, or skills, for a good leader as being:

1. Carries responsibility well and can be counted on to do what has been promised.
2. Is self-confident with both age-mates and adults; seems comfortable when showing personal work to the class.
3. Is well liked.
4. Is cooperative, avoids bickering, and is generally easy to get along with.
5. Can express him- or herself clearly.
6. Adapts to new situations; is flexible in thought and action and is not disturbed when the normal routine is changed.
7. Enjoys being around other people.
8. Tends to dominate; usually directs activities.
9. Participates in most school social activities; can be counted on to be there. (p. 49).

"Determining characteristics of gifted Situational Leadership requires different leadership traits and skills to be applied for different leadership situations; however, there are traits and skills that seem to characterize all leaders" (Davis & Rimm, 1998, p. 178). Consistent with this thinking is the definition of leadership found in Renzulli's (1983) leadership rating scale that is

taken from criteria used by teachers to evaluate student leadership and includes the same nine skills reported by Sisk (1985).

Kouzes and Posner (2006) believe “leadership is a relationship between those who aspire to lead and those who choose to follow” (p. 1). They espouse that gifted leaders are ones who master the dynamics of the leader-follower relationship. They have forged common patterns of effective leaders into what they call ‘The Five Practices of Exemplary Student Leadership’. These practices are Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart. The characteristics implicit within these patterns are best explained as personal credibility, envision the future and enlist others in a common vision, seek challenges and take risks, foster collaboration in others, and recognizing contributions of others (Kouzes & Posner, 2006).

The Gifted Evaluation Scale (GES) by McCarney and Anderson (1998) contributes to the identification of gifted and talented students by relying on information provided by educators who work directly with students and have primary behavioral observation opportunities. The rating scale is based on the Marland definition of giftedness (1972). The leadership sub-scale consists of ten observable leadership traits.

1. Takes a leadership role.
2. Enjoys working towards goals.
3. Demonstrated character and integrity.

4. Takes an active role in elected offices.
5. Facilitates group activities.
6. Presents ideas, clarifies information, and influences others.
7. Facilitates positive interpersonal relations within a group.
8. Organizes and leads groups.
9. Is chosen or elected to a leadership position by peers.
10. Naturally assumes leadership roles. (Henage, 1990, p. 3).

Synthesizing twenty-five years of experience working with gifted student leaders, John Lester (2008), a leading educator and consultant at the Ohio Leadership Institute, has condensed the multiple lists of gifted leadership abilities found in research into ten observable skills. He posits that these skills are observable, universal, and can be developed in students of all ages who display potential leadership abilities.

1. Volunteers for tasks.
2. Takes charge of group games or activities.
3. Excels at making decisions or solving problems.
4. Embraces new challenges or initiatives.
5. Is well liked by peers.
6. Influences the behavior, beliefs or actions of peers.
7. Excels in academic achievement or intellectual pursuits.
8. Shows an interest in the welfare of others.

9. Exhibits a natural competitive spirit.
10. Displays an energetic drive or high levels of ambition. (p. 1).

Arguing that giftedness is not a directly observable trait, Hagen (1980) suggests leadership giftedness can be viewed as a psychological construct, a characteristic that is abstracted from a variety of behaviors, but which is presumed to have educational or psychological meaning. Hagen observes that "Inferences about giftedness will be accurate to the extent that the characteristics or behaviors we choose to observe are relevant to the construct and are validly and reliably appraised" (p.1). She posits developing a clear statement of the behaviors that exemplify the giftedness construct. Few gifted programs identify students with high leadership potential or incorporate leadership education into their curricula. However, according to Karnes and Bean (1990) many common characteristics of gifted youth enable them to profit from leadership development. Those characteristics include the following:

1. The desire to be challenged.
2. The ability to solve problems creatively.
3. The ability to reason critically.
4. The ability to see new relationships.
5. Facility of verbal expression.
6. Flexibility in thought and action.

7. The ability to tolerate ambiguity.
8. The ability to motivate others. (p. 2).

Defining Leadership Constructs

Educators of gifted students are faced with a great challenge. They must not only use research-based criteria in selecting appropriate leadership characteristics in their identification models, but they also must choose between the various lists of traits and skills and the recommendations of researchers. In order to improve understanding of the perceptions of leadership characteristics, a list of each construct listed by multiple researchers in the literature review and the researcher(s) who include them in their definition of gifted leadership abilities is included here.

> Carries responsibility well and can be counted on to do what has been promised (Kouzes & Posner, 2006; Renzulli, 1983; Sisk, 1985).
>
> Takes charge of group games or activities (Lester, 2008; McCarney & Anderson, 1998; Renzulli, 1983; Sisk, 1985).
>
> Excels at making decisions or solving problems (Karnes & Bean, 1990; Lester, 2008; Plowman, 1980).

Embraces new challenges or initiatives (Karnes & Bean, 1990; Kouzes & Posner, 2006; McCarney & Anderson, 1998; Lester, 2008; Plowman, 1980; Sisk, 1985).

Is self-confident with and well liked by peers (Lester, 2008; McCarney & Anderson, 1998; Renzulli, 1983; Sisk, 1985).

Influences the behavior, beliefs or actions of peers (Karnes & Bean, 1990; Kouzes & Posner, 2006; Lester, 2008; McCarney & Anderson, 1998; Plowman, 1980).

Excels in academic achievement or intellectual pursuits (Lester, 2008; Plowman, 1980).

Shows an interest in the welfare of others (Kouzes & Posner, 2006; Lester, 2008; McCarney & Anderson, 1998; Plowman, 1980; Renzulli, 1983).

Displays an energetic drive or high levels of ambition (Kouzes & Posner, 2006; Lester, 2008; McCarney & Anderson, 1998; Plowman, 1980; Renzulli, 1983).

Possesses the ability to evaluate one's self, situations, and the interrelation of situations and people (Karnes & Bean, 1990; Kouzes & Posner, 2006; Sisk, 1985).

Exhibits strong communication skills (Karnes & Bean, 1990; Kouzes & Posner, 2006; McCarney & Anderson, 1998; Plowman, 1980; Sisk, 1985).

Problems with Identification

Once the leadership construct is finally determined, consistent criteria need to be applied to properly identify the gifted student. Feldhusen (1989) states the problems in the identification of gifted and talented youth can occur at various points within the identification process. He posits that a sound identification process should include five major steps "each of which must be viewed separately in order to determine its validity within the framework of the entire process" (p. 7). Those five steps are:

1. Defining program goals and types of gifted youth to be served.
2. Nomination procedures.
3. Assessment procedures.
4. Individual differentiation.
5. Validation of the identification process. (p. 7).

In approaching the identification process, according to Feldhusen and Pleiss (1984), program directors should consider the goals of the identification process, the types of talent or ability to be identified, the goals of the program, and/or the goals for the youth who will be selected.

> Since the use of nomination and rating scales has become ubiquitous in identifying gifted and talented students, one might hope that not only would the best available scales be selected or that developers would have psychometric competence, but also that corroboration of ratings would be obtained by securing multiple assessments from different points of view. (Feldhusen & Pleiss, 1984, p. 242).

Alexander and Maia (1982) provide the following overview of an effective identification processes.

> The information accumulated and analyzed to make decisions about who will participate in gifted programs falls into general categories; objective and subjective data. Objective data are those types of information of a test nature that can be quantified and are frequently standardized or norm-referenced. Sources of objective data most often employed to distinguish the gifted from the non-gifted include group and individual intelligence tests, achievement tests or test batteries, and academic grade point averages. Subjective measures, on the other hand, include behavioral checklists, recommendations, and referrals that are characterized by personal judgments about an individual's performance and capabilities. (pp. 21-22).

Alexander and Maia (1982) discuss four advantages of subjective information in identification strategies. These can be summarized as:

1. Fosters personal awareness.

2. Utilizes a breadth of information.

3. Situationally appropriate.

4. Culturally appropriate.

A committee from the Parliament of the Commonwealth of Australia (1988) makes a recommendation as to the process of gifted identification. The Committee's review of the evidence suggests that identification “should be a continuous process which does not rely on a single measure, but is as comprehensive as possible” (section 3.46). The study continues by stating “the process should include the whole class or the whole school and ideally be conducted by a team, to lessen subjective elements in the assessment” (section 3.46).

Over the years, researchers have identified characteristics—traits, aptitudes, and behaviors—that appear to be common to all gifted students and that distinguish them from students not considered gifted. Gallagher and Kinney (1974), for example, suggest that whatever their cultural background gifted children hold certain mental abilities in common, even though their expression or display may vary from one culture to another. The stated characteristics include the ability to:

1. Meaningfully manipulate some symbol system held valuable in the subculture.
2. Think logically, given appropriate data.
3. Use stored knowledge to solve problems.
4. Reason by analogy.

5. Extend or extrapolate knowledge to new situations or unique applications. (Gallagher & Kinney, 1974, p. 6).

Many researchers report that lists of characteristics of gifted leadership include references to such traits, aptitudes and behaviors as the gifted child's (Davis & Rimm, 1989; Frazier & Passow, 1994; Renzulli, 1983; Sternberg, 1986; VanTassel-Baska, 1989). These researchers suggest that such traits, aptitudes, or behaviors can be considered "general or common" attributes of giftedness agreeing that they appear to be universal and cross-cultural in contrast to "specific behaviors" that manifest themselves in particular contexts or settings.

> Typically, lists of characteristics include references to such traits, aptitudes, and behaviors as the gifted child's: (a) facility in manipulating abstract symbol systems, (b) early language interest and development, (c) unusually well developed memory, (d) ability to generate original ideas, (e) precocious language and thought, (f) superior humor, (g) high moral thinking, (h) independence in thinking, (i) emotional intensity, (j) high levels of energy, (k) early reading and advanced comprehension, (l) logical thinking abilities, (m) high levels of motivation, (n) insights, and (o) advanced interests. (Frazier & Passow, 1994, p. xvi).

Karen Rogers (2002) identified research-based behaviors of the five major domains in the Marland report. Targeting leadership, she states "The behaviors associated with identification in the leadership and psychosocial domains are backwards planning, scanning, the need to achieve, social cognition, emotional stability, and perspective-taking" (pp. 29 – 30). Rogers describes backwards planning as the ability to sequentially break down a complex task into its parts by backwards planning. Scanning is the ability to

look holistically at complex information and choose similarities of differences with little effort independent of situational and social pressures of others' attitudes. The need to achieve is an intense drive to master a domain of knowledge. She describes social cognition as an intuitive knowledge of how one should behave and treat others and emotional stability is the tendency to remain calm and even-tempered with little tendency toward anxiety or nervousness. Finally, Rogers describes the leadership behavior of perspective-taking as having the ability to understand someone else's ideas, feelings or moods, or to orient self in space. Whatever criteria are used, it is universally accepted that the identification of giftedness should begin early, involve multiple criteria and should be on-going (Rogers, 2002).

Cultural Considerations

In passing the Jacob K. Javits Gifted and Talented Students Education Act of 1988 (P.L. 100-297) Congress reasserted the belief "that youngsters with talent potential are found in all cultural groups, across all economic strata, and in all areas of human endeavor" (Frasier & Passow, 1994, p. xiii). "By defining giftedness dynamically, the possibilities for demonstrating potential by individuals from all groups are markedly increased" (Frasier & Passow, 1994, p. xviii). Dynamic assessment focuses on the specific behaviors, the ways the absolute attributes are displayed in a particular context.

The Marland Report (1972) posits that the problems of screening and identification of minority gifted students are complicated by faulty assumptions

that “talents cannot be found as abundantly in certain groups as in others with the emphasis heavily in favor of the affluent” (pp. 7-8). Frasier and Passow also contend that the validity of tests of mental ability…

> “discriminate against minority and economically disadvantaged students and those whose linguistic and perceptual orientation, cognitive styles, learning and response styles, economic status, and cultural or social background differ from the dominant groups used to norm such tests—i.e., White, middle-class populations” (p. xii).

The implications of these reports are as consistent and poignant with defining characteristics of gifted leadership as they are with other categories of giftedness. There continues to be an under-representation of minority, low socioeconomic and handicapped students identified as and within gifted programs. It is crucial, therefore, that any effort to identify gifted leadership abilities includes a strong identification component based on a varied body of evidence sensitive to multiple cultures and populations of students.

This study with its obvious limitations was unable to address cultural and other sub-population inequities inherent in current screening processes. It did, however, use every attempt to include a high level of sensitivity in its methodology and recommendations.

Leadership Studies

The majority of current research in the area of leadership is being done with adult leaders (Karnes & Bean, 1996). Studies of leadership ability in gifted students that do exist are combined with other facets of gifted education including but not limited to program development and curricula that vary in

trends using adult personality-rating instruments, gender discrepancies, settings such as urban versus rural, and the outcomes of service-learning projects. This makes comparison of actual gifted leadership identification in student studies difficult.

Chauvin & Karnes (1983) designed a study comparing leadership qualities of adult leaders with those of high school students identified as gifted and talented. Using the adult leaders' results on a personality instrument, they discovered that the adult leaders were found to have higher scores on the intelligence, enthusiasm, conscientiousness, self-sufficiency, and self-control subtests than those of the high school students tested. After administering a similar personality questionnaire to 181 high school students who had been previously identified as gifted and talented, the researchers compared the responses on similar subtests to those of the adult leaders. The students demonstrated higher scores on intelligence, enthusiasm, and self-sufficiency than the adult leaders. However, the students demonstrated lower scores in the area of conscientiousness and self-control which shows a developmental level discrepancy.

A research study that approached identification of leadership abilities from leadership development through programming was done by Karnes, Meriweather, and D'Ilio (1987) who measured the leadership development of secondary students identified as gifted and talented in the United States in both 1985 and 1986. They found that in both years, students' mean raw scores in nine

sub-categories of leadership increased significantly (p=0.01) after participating in the Leadership Studies Program. Although the purpose of the study was leadership development through programming, the results are useful to identification studies in the correlation between students' recognized gifted cognizant ability to gifted leadership ability.

A leadership program designed for gifted students in China was reported by David Chan (2000). The implementation of the program in China resulted in the adaptation of the 1972 US federal definition of giftedness by Marland, which used leadership as a characteristic of giftedness. Chan used a creative leadership training program to engage secondary gifted students in: (a) defining leadership by acquainting the participants with role models of Chinese and world leaders, (b) teaching teambuilding skills, interpersonal communication skills, planning, problem solving and decision making in small groups and (c) assuming leadership roles in group exercises to integrate and practice leadership skills. The gifted students were given the Roets Rating Scale for self-perception of leadership characteristics before and after the leadership training. The scale listed 25 characteristics of leadership, which the students rated on a five-point scale. Higher ratings were obtained after the program indicating that students perceived themselves to be more effective leaders at the conclusion of the program.

Chan (2003) also measured leadership self-efficacy in secondary Chinese students identified as gifted and talented. He found that the students' pretest and

posttest ratings on the Roets Rating Scale for Leadership were significantly correlated, specifically in the area of leadership self-efficacy; students' mean scores improved from 8.37 to 9.02 after participating in a leadership training program. Based on the Marland report definition with the view that leadership is a special type of giftedness and as a result of Chan's research, "the Education Department of the Hong Kong government has recently allocated sizable amounts of financial and human resources in its development of a 'leadership enhancement' scheme for gifted students" (Chan, 2003 p. 166). Again, this study identified student development rather than initial identification, but its impact on leadership studies is major as evidenced by the plethora of leadership studies that reference it.

In a later study, Chan (2007) questioned earlier studies that intelligence plays an important role in leadership. He explored the leadership-intelligence connection by examining the three components of leadership in relation to emotional intelligence as well as what he termed 'successful intelligence' or the intelligence recognized as high academic ability in a sample of gifted students nominated by their schools to participate in university gifted programs. Chan worked under the premise of Fiedler's work (1996) "that leadership cannot be viewed simply as traits or behaviors, but should be viewed as a highly contextual construct that emerges through a complex interaction of leaders, followers, and situations" (Fiedler, 1996, as cited in Chan, 2007, p. 186). Student leadership was assessed using the 15-item Chinese Roets Rating Scale

for Leadership (RRSL) which yielded scores on the three components of leadership: self-efficacy, leadership flexibility, and goal orientation. His findings indicated that "practical abilities in applying analytical and creative talents to specific situations could be even more important than analytical abilities and students who reported having high abilities in emotional management and regulation could be more effective leaders" (p. 188).

The studies pertaining to leadership and gender reveal a variety of conclusions. Karnes and D'Ilio found that "significant differences were found to favor girls on emotional stability, dominance, and the secondary factor of independence" (1989, p. 77). Sex-role stereotyping of leadership roles found that girls both in elementary and secondary grades perceived most of the leadership roles to be suitable for either gender, whereas the boys held more traditional stereotypical views (Karnes & D'Ilio, 1989). In a study by Karnes, Bean and McGinnis (1994/95) it was found that secondary-level female leaders did not think that popularity was a prerequisite for leadership, that men made better leaders, that leaders must make good grades, that leaders must be wealthy, or that leaders must come from large urban areas.

Comparisons between emergent leadership styles were exposed in a research project by Lindsay Holmes (2005) where an experimental group was given a pre and post test using the Leadership Skills Inventory (Karnes & Chauvin, 2000) after developing a service-learning project in a cooperative group setting. The mean scores of the experimental group on the Leadership

Skills Inventory increased significantly in four categories of leadership: fundamentals of leadership (FL), speech communication skills (SCS), group dynamic skills (GDS), and planning skills (PLS). Each of these areas was supported by the activities that formed the service-learning project. Students in the experimental group were exposed to the concept of leadership and asked to consider the fundamental qualities that define an "effective" leader. Her conclusion states "Although service-learning may not be an effective alternative for a leadership curriculum on its own, it can be combined with other skills-based training programs to provide students with an experiential setting" (2005, p. 141).

Leadership studies for children are often integrated within studies of multiple constructs. One such study was completed by Feldhusen and Pleiss (1994). Working from the premise that leadership is often conceptualized as social and cognitive skills, they studied 54 students rated gifted leaders by their teachers. Significant correlations were found between leadership and dramatic skills and between creativity and dramatics skills, but not between leadership and creativity. Their purpose was to establish potential value of training in creativity and dramatics for leaders. Feldhusen and Pleiss (1994) concluded from the results there existed "a potential role of histrionic skill in leadership behavior and the potential value of training in dramatic skills in leadership education" (p.3). They continue to conclude that the failure to find significant correlations of creativity in leadership behavior raises doubt about the emphasis

placed on creative thinking and creative problem solving and their role in leadership identity.

Myers and Slavin (1990) examined the relationship between leadership and task demands with unstructured and novel problems. They studied 122 secondary school students identified with both gifted intellect and leadership skills, and gave them an opportunity to participate in an unstructured task observing leadership attributes that emerged throughout the project. They then characterized students into leadership types. Myers and Slavin (1990) concluded success with unstructured tasks requires the emergence of leaders who "have the ability to help the group define a problem" (p. 6). Although other types of leaders emerged, they raise the question whether groups with leaders who were unsuccessful in their tasks should be identified as gifted leaders.

A ten-week social cognition intervention study on self-esteem, loneliness, parent-adolescent communication and perception of leadership development of high school students was performed in 2007 by the Flippen Group in a city in east-central Texas. The curriculum approached leadership theory based on the work of Robert Marzano from the viewpoint that the essential characteristics of great leadership that can be condensed into three major areas: relational, intentional, and transformational (Flippen, 2007). The relational component of leadership involves the concept of trust because members of an organization must trust the intentions, integrity and competence of its members. Strong intentional leaders must have a strong personal sense of

purpose. Finally, transformational leadership is “when effective leaders encourage group processes that reward team effort” (Flippen, 2008, p. 8). Students who participated in the study increased their leadership development as well as five psycho-social components as reported in a self-reporting questionnaire.

Leadership Assessments

After reviewing the literature, it is apparent no single standardized test of leadership will identify the leadership potential of gifted and talented students. As with other areas of giftedness, a combination of methods will aid in identifying students who excel in this area and in determining individual strengths and weaknesses. Addison (1985) reports some of the methods found to be useful include:

1. Nomination and/or rating scale measurements by peers, teachers, self, or community groups.
2. Observation of simulation activities.
3. Biographical information on past leadership experiences.
4. Interviews.
5. Personality tests (such as the Myers-Briggs Type indicator).
6. Leadership styles instruments (such as the Leader Effectiveness and Adaptability Description) which may be interpreted to give leadership profiles. (How Can Teachers Identify section, ¶ 2).

Of the six assessment types above, three are used more often in student leadership literature and in public K-12 education. Observation used in education is a planned viewing and analysis of students' behaviors and skills, their work environment, and their interactions with other students and their teachers. It gives the teacher the opportunity to see how students solve problems and to learn what factors may affect their ability to learn, complete work, and interact in a positive way with others. A rating scale is a set of categories designed to elicit information about an attribute. In psychometrics, rating scales are often referenced to a statement which expresses an attitude or perception toward something and give the rater the opportunity to respond with varying degrees. The third type of assessment referenced here is the formal assessment. Leadership styles instruments are formal assessments where the validity is researched and determined to give a numerical score based on student performance. These three types of assessments were offered as preference options in the Student Leadership Survey.

Leadership can only be improved by using measures that accurately identify persons who display the potential to develop leadership abilities. The availability of appropriate assessments for measuring leadership abilities in gifted students is best summed up by Oakland, Falkenberg, and Oakland (1996) when they conclude "currently we lack the assessment technology to measure leadership adequately in children and youth. . . Despite the need, there are few

suitable measures of leadership for children and youth" (p.138). They add "The assessment of leadership must go beyond the use of existing scales and surveys" (p. 138).

A priority recognized by Shore, Cornell, Robinson and Ward (1991, as cited in Oakland et al., 1996) was "the need to demonstrate that leadership constitutes an array of qualities that can be assessed suitably" (p. 144). Using this as a condition for their evaluation, Oakland et al. (1996) contend that this priority remains largely unmet for children. "Significant deficiencies exist in the assessment of leadership among children and youth, and few standardized measures of leadership are available" (p. 144). They continue "We clearly lack the assessment technology to adequately measure leadership in children and adults" (p. 145).

The enormity of the gifted leadership identification task for educators is overwhelming without reliable and valid assessments. The report of the Assessment of Leadership in Children, Youth and Adults by Oakland, Falkenberg & Oakland (1996) provide a comprehensive analysis of the reliability and validity of eleven formal leadership assessments. Their findings are condensed and summarized here and include only an assessment of the six assessments intended for children and/or youth used in their study. Additional assessments explained in the summary that follows were analyzed from other works.

The Leadership Ability Evaluation (LAE) (Cassel & Stancik, 1982) is a formal instrument that measures decision-making patterns or social climate by someone in a leadership position. It is a 50-item paper-pencil multiple-choice test designed to be self-administered by persons beyond grade eight. It is based on the work by Flanagan (1952) and evaluates four leadership decision styles: laissez-faire, democratic-cooperative, autocratic-submissive, and autocratic-aggressive. Its responses can also be analyzed according to one of five life activity areas: home and family, work and vocational, play and avocational, school and educational, and community.

There were several limitations to this study, the first and most significant being that the method of data collection was entirely self-report. In a study conducted by Friedman, Friedman & Van Dyke in 1984 (as reported in Oakland et al., 1996), self-nominations were shown to be the most effective method for identifying the leadership gifted when compared to peer and teacher nominations. However, extenuating conditions may have affected the students' rating of themselves on either the pre-assessment, post-assessment, or both instruments. Oakland et al (1996) conclude "LAE data generally is lacking and much of the test data are difficult to interpret. The use of the LAE is not recommended" (p. 142).

The Leadership Skills Inventory (LSI) (Karnes & Chauvin, 1985) is a 125-item paper-pencil or computer-administered inventory designed to assess leadership abilities of children and adolescents in grades 4 through 12. The LSI

identifies areas of strengths and weaknesses in leadership and can be re-administered to measure growth and improvement over time. Nine dimensions of leadership are measured: fundamentals of leadership, written communication skills, speech communication skills, values clarification, decision-making skills, group dynamics skills, problem-solving skills, personal development skills, and planning skills. The inventory is made up of statements that focus on the knowledge and skills of leadership. The instrument is a self-report questionnaire that offers a series of knowledge or skill-based statements for each category. The test results are intended to assist students in learning about and developing their leadership skills.

Although the authors state that the nine leadership skills are based on a review of the literature, they do not associate the skills with any identified theory of leadership. Oakland et al. (1996) conclude "The lack of concurrent or construct validity data weakens the LSI as a measure of leadership" (p. 142).

The EBY Gifted Behavior Index (Eby, 1989) consists of a product rating scale and six paper-pencil checklists used to assess gifted behavior in six talent areas: verbal, math-science-problem-solving, musical, visual-spatial, social-leadership, and mechanical-technical-inventiveness. The checklists are intended to be used by teachers familiar with qualities being assessed. The checklists are intended for use with all ages. The checklists may be used for screening and selection of students for inclusion in gifted programs.

Oakland et al. (1996) contend that “the scales are not based on an identified theory of giftedness, the statistics supporting the psychometric quality of the individual sales have not been gathered adequately, and the reliability and validity of the instrument also is lacking” and conclude “The use of the EBY Gifted Behavior Index to assess leadership is not recommended” (p. 143).

The Gifted and Talented Screening Form (GTSF) (Johnson, 1979) is a 24-item scale for use with students in grades K through 9. Items from the GTSF are grouped into six content areas, each having four items: academics, intelligence, creativity, leadership, visual and performing arts, and psychomotor-athletics and mechanics. Parents and teachers rate students based on the frequency that various characteristics of giftedness are observed.

Norms for the GTSF are unavailable and an estimate of internal consistency for the leadership scale is satisfactory. It also lacks other reliability indices. Oakland et al. (1996) conclude that “Lacking norms and suitable evidence of reliability and validity, the use of this measure is questionable” (p. 143).

The Gifted Evaluation Scale (GES) (McCarney & Anderson, 1987) is designed for gifted behaviors in ways consistent with the definition of giftedness in Public Law 95-561. The scale is designed to be completed by educators who are familiar with the students being rated. The sub-test for leadership is a 10-item Leadership subscale. Although the GES items were constructed to be

consistent with the federal definition of giftedness, the leadership items were not constructed to be consistent with an identified theory of leadership.

The availability of norms and satisfactory estimates of internal consistency and test-retest reliability are positive features. However, Oakland et al. (1996) conclude “Construct validity of the leadership construct is problematic, and the veracity of the concurrent data is questionable…Its use as a suitable concurrent measure is questionable” (p. 143).

The Scales for Rating the Behavioral Characteristics of Superior Students (SRBCSS) (Renzulli, Smith, White, Callahan, & Hartman, 1976) is a 95-item paper-pencil measure with ten subscales, one of which assesses leadership characteristics. It is designed for children and adolescents; however, a specific age range is not specified in the manual. It is intended to solicit teacher judgments in identifying students who might be classified as gifted and talented.

There are some limitations to the measurement. Norms are not reported. Some support for the content validity of the leadership subscale is available in that the items were written to be consistent with characteristics identified in a literature review on leadership. “The SRBCSS lacks comprehensive norms, demonstrates variable reliability, and does not report validity data extensively in the manual” (Oakland et al., 1996. p. 144).

The Roets Rating Scale for Leadership (RRSL) (Roets, 1997) is an identification instrument for ages 8–18. Using this instrument, students rate their frequencies of certain behaviors with a five-point Likert-type scale in three

subscales: Leadership self-efficacy, flexibility, goal orientation. The RRSL was developed to help in the identification of students who might benefit from her leadership training program.

Reliability was high and comparisons between the RRSL and the Checklist for Leadership and the Leadership portion of the Scales for Rating Behavioral Characteristics of Superior Students (SRBCSS) suggests a strong relationship among the instruments.

The Student Leadership Practices Inventory (Student LPI) (Kouzes and Posner, 2005) is designed specifically for students and young people. The third edition of this instrument approaches leadership as a measurable, learnable, and teachable set of behaviors. This assessment tool helps students and young people measure their leadership competencies, while guiding them through the process of applying the Five Practices of Exemplary Student Leadership model in real-life challenges: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart. Identified as practices common to successful leaders, these leadership practices correspond well to the developmental issues of importance for college students. This instrument was developed and normed with use for college-age students. Its reliability and validity as an application to younger students has not been established.

The Fundamental Interpersonal Relations Orientation Behavior (FIRO-B) was first proposed by William Schutz in 1958. The needs model idea is based on the theory that people need people and individuals seek to establish

compatible relationships with others in their social interactions (Schutz, 1958). When they do this, three interpersonal needs develop that must be satisfied for effective functioning: the need for inclusion, the need for control, and the need for affection. The fifty-year-old assessment is still used mainly for adult managerial development. The belief is that knowing interpersonal orientations is important for managerial success. The application for student leadership is in developing the interpersonal aspects of leadership. It is included here with an explanation since it is reported specifically in the U. S. Department of Health, Education and Welfare definition of gifted leadership of 1972.

A wide variety of formal measures is available for the identification of gifted leadership abilities. No procedure is necessarily better or worse than another in isolation as all have merits and disadvantages. The selection of instruments should be chosen directly from the specific definition of giftedness and take into account the specific context.

Theoretical Frameworks

The discussion of identification of leadership skills in an abstract environment versus the intentional development of leadership abilities in young students leads to the application of a theoretical framework from which to work. An understanding of these theories helps the educator target leadership development and training, and molds the definition into an avenue within which an educator can function.

Sternberg (2005) believes that if intelligence is properly defined and measured it will translate to real-life success. He breaks his Triarchic Theory of Intelligence into three facets or sub-theories: Analytical, Creative, and Practical. Analytical Intelligence is similar to the traditional standard psychometric definition of intelligence and is how an individual relates to his internal world. Creative Intelligence involves insights, synthesis and the ability to react to novel situations and stimuli. Practical Intelligence involves the ability to grasp, understand and deal with everyday tasks. Embedded in the theory is the belief that intelligence is inherent.

Theodore Brameld (Cohen, 1999) was the founder of social reconstructionism in reaction against the realities of World War II. He posits that social reform should be the aim of education in creating a better world. Leadership used from this framework is developed in situations where students are involved in community and social projects.

The one of proximal development was developed by Lev Vygotsky and is the theory what a learner can do without help and what he or she can do with help. Vygotsky stated that a child follows an adult's example and gradually develops the ability to do certain tasks without help or assistance (Cohen, 1999). This aligns closely with the developmental theory of leadership.

Academic rationalism conceptualizes curriculum as distinct subjects or disciplines. This perspective emphasizes the school's responsibility to enable the young to share the intellectual fruits of those who have gone on before,

including not only the concepts, generalizations, and methods of the academic disciplines but also those works of art that have withstood the test of time (Hirst & Peters, 1974). Becoming educated means becoming initiated into the modes of thought these disciplines represent. This concept would break leadership down into a specific entity to be taught as a subject of its own.

Constructivism as a learning theory of knowledge which argues that humans generate knowledge and meaning from their experiences. Social reconstructivists use leadership as a developmental construct that enables leaders to move ideals to higher levels with experience. Within constructivism lies the social cognitive theory.

> "Social cognitive theory emphasizes a dynamic interactive process to explain human functioning. This theory ascribes a central role to cognitive processes in which the individual can observe others and the environment, reflects on that in combination with his or her own thoughts and behaviors, and alters his or her own self-regulatory functions accordingly." (Burney, 2008)

Since there is no consensus on an exact definition of giftedness, "there is a wide agreement that highly able learners need appropriately challenging and interesting learning experiences in order to develop their potential" (Burney, 2008). Cross and Coleman (2005) give a school-based conception of giftedness. They portray giftedness as an advanced development that needs continual practice to maintain that high level of ability or the giftedness may be lost. "Higher performance requires more advanced educational opportunities and to do well in an advanced curriculum a student will likely have to acquire the self-

regulatory behaviors that will foster continued mastery" (Burney, 2008). This theory blends programming with development and is the basis of many leadership programs.

Gifted Programming

Only 31 states in the United States have laws requiring programming be made available for the gifted. Of these, approximately 28 require that the services must be adequate to meet to the educational needs of every gifted student (National Excellence, 1993). Leadership has grown in importance in programs for the gifted since the inception of the nationally recognized Marland definition of giftedness which uses leadership as one characteristic of giftedness (NAGC, 2008).

Experts in the field of gifted education (Addison, 1985; Karnes & Chauvin, 1986; Renzulli & Reis, 1986; Karnes & Bean, 1990; Sisk, Gilbert & Gosch, 1991; Davis & Rimm, 1994; Lester, 2008) have all agreed that leadership development is an important component of programming for gifted students. In a leadership program designed for gifted students in China, Chan combined definitions of leadership as stated by other researchers (Feldhusen & Pleiss, 1994; Davis & Rimm, 1998) and determined that leadership qualities are found by individuals who encourage others to lead.

According to Karnes and Bean (1990) leadership is learned over time through involvement with others. They advocate integrating leadership training throughout all curricula. In a more recent work, Karnes and Bean (1995) asked

the question why human potential toward leadership remained underdeveloped. They blamed some of this on “confusing messages and misconceptions relayed to young people throughout society” (p. 13) and came to the conclusion that “interactions with students through leadership training programs led us to the realization of the need for a more systematic process for leadership training” (p. 8).

Summary and Discussion

The historical perspective of gifted identification traverses a progression from using narrow psychometric assessments to a broadening of observable characteristics or traits in multiple areas. One of these areas is leadership but the definition of leadership identification is vague and shrouded in theories, phases, styles, and opinion. Combining leadership with measures for high intelligence creates complexities in sorting academic abilities from leadership potential. The more recent discussions are held around developing recognized leadership potential by incorporating leadership curricula that uses the skills approach of leadership in classroom studies. Many researchers agree that leadership is a developmental construct and can be improved with practice. As with other gifted abilities, leadership gifted abilities are found in all cultures and populations and gifted educators need to be sensitive as to how those abilities may manifest themselves in students.

Leadership studies in young students in the United States are too few to define measurable trends and most use adult subjects so caution is often

encouraged when generalizing findings to the K-12 population. More leadership assessments developed for students need to be researched and updated to strengthen reliability and validity. Gifted programming evaluation studies are beyond the scope of this paper; however, program development cannot be separated from the research on gifted leadership. The emphasis on leadership training makes a strong statement about leadership identification and provides a theoretical framework for the work being done. The message is clear that gifted leadership is a developmental process and that even young children with leadership potential can develop their gifted abilities. The role leadership development plays in our nation's schools is crucial to the development of future leaders. "Leadership development is essential to provide youth with the skills and concepts necessary to make positive changes across peer groups, school, community, religious affiliations, state, and nation" (Karnes & Stephens, 1999, p. 62). All of these components emphasize the enormity of the task for current gifted educators and the need for a deliberate and well-defined body of evidence to be used for identification.

CHAPTER III

Methodology

Introduction

The purpose of this study was to describe, compare and analyze the perceptions and attitudes of administrators of gifted students regarding the identification of gifted leadership abilities in K-12 students. First, the level of expertise in the participants of the study was determined. Second, the philosophical attitudes of the educators were described. Third, the perceptions of appropriate traits and/or skills of gifted leadership abilities were pooled and compared between educators of gifted students in Colorado with those in Idaho. An analysis was performed to determine whether significant differences exist between attitudes of Idaho, that has had an expanded definition of gifted abilities in identifying students gifted in leadership abilities fourteen years longer, and Colorado that has a new mandate and no established criteria as of the date of this research. Finally, an analysis was performed to determine the philosophical or theoretical factors that have proved to be obstacles in the identification of students gifted in leadership abilities.

Research Design

A quantitative description of perceptions of gifted leadership abilities in relation to independent variables was determined through the use of a survey. The inquiry was accomplished by surveying the population of 179 Colorado school district administrators of gifted education programs and the 115 school district administrators of gifted education programs in Idaho. The procedures that were involved in collecting the data are outlined in this chapter with the following topics:

1. Research questions.
2. Methodology and sampling.
3. Questionnaire design.
4. Pilot study.
5. Survey procedures and data collection.
6. Data analysis.
7. Strengths and weaknesses.

Research Questions

This study was designed to investigate the following research questions:

1. What were the attitudes and perceptions of administrators of gifted student programs in K-12 school districts in Colorado in the identification of students gifted in leadership abilities?

2. What were the attitudes and perceptions of administrators of gifted student programs in K-12 school districts in Idaho in the identification of students gifted in leadership abilities?

3. Were there significant differences in the attitudes and perceptions in the identification of students gifted in leadership abilities in administrators of gifted student programs in Colorado and Idaho?

4. Were there significant correlations between foundational leadership philosophies and leadership assessment preference used in identifying students gifted in leadership abilities?

5. Were there significant relationships between foundational leadership philosophies and perceptions of gifted leadership abilities?

Methodology and Sampling

The descriptive survey was selected as the most appropriate method of research for this study in order to identify attitudes and perceptions that influence the identification of students gifted in leadership abilities. “Surveys are a widely used method of research in sociology, business, political science, and government, as well as in education” (Ary, Jacobs, and Razaveih, 1996, p. 427). “The aim of survey research is to discover the universal laws operating in society. It is thought that such laws are best uncovered through a deductive, scientific method, whereby data is collected through a survey instrument in order to test a theory” (Darity, 2008, p. 196). An additional advantage of using a

survey for this study is that it is a common method in soliciting data from public education (Ary et al., 1996).

Descriptive data were collected and quantified from the units of analysis (administrators of gifted programs) by way of an e-mail survey. “A survey is a systematic method for gathering information from a sample of elements for the purposes of constructing quantitative descriptors of the attributes of the larger population of which the entities are members” (Groves, Fowler, Couper et al., 2004, p. 2). The ability to quantify the descriptors sought in the survey enable the researcher to generalize from a sample to a population. The two states of Colorado and Idaho were used as independent variables.

The study design for this research was cross-sectional in that the unit of analysis was described at one point in time and is the method of choice if one wants to gather the data at the same point in time. But a major disadvantage of the cross-sectional method is that chance differences between samples may seriously bias the results (Ary et al., 1996). A personal note was first sent via electronic mail to respondents requesting their participation in the survey. The use of electronic surveys has been shown to be advantageous because they can be completed at the pace the respondents choose, and an electronic contact with a potential respondent remains in place until purposefully deleted. “Respondents also find electronic surveys appealing” (Cook, Heath, & Thompson, 2000, p. 823). Accessibility to the electronic survey for the population of school administrators is almost assured in the current educational environment. This

makes an e-mail survey appropriate as it has only minor coverage problems (Cook et al., 2000).

Once a personal note was sent, the respondents were then provided a web-based link to access the survey. This prevented blockage by most computer firewalls and minimized issues with accessibility. The survey was sent with follow-up notices sent by the Vovici Survey Software (1997) directly to participants who did not return the original instrument in a timely manner. This guaranteed confidentiality and anonymity of the respondent and solicited a return from any respondent who hesitated because of these issues. Another advantage of a mail or email survey is that this methodology works well with a defined population. In addition, written and demographic data can be gathered at the same time (Ary et al., 1996).

One disadvantage of survey methodology is the possibility of misinterpretation of the questions by the respondents. “It is extremely difficult to formulate a series of questions whose meanings are crystal-clear to every reader” (Ary et al., 1996, p. 436). Another important limitation is the low rate of return experiences by past survey research studies. Ary et al. (1996) posit that the results of the emailed questionnaire can be more positive under certain conditions.

Studies have shown that there are usually systematic differences in the characteristics of respondents and nonrespondents to questionnaire studies. Response rate is often higher among the more intelligent, better educated, more conscientious, and more interested of generally more favorable to the issue involved in the questionnaires (p. 436).

Survey methodology is proved to be a reliable and valid measure. "Substantial research, however, offers support for the adequacy of survey measurement. Many of the criticisms of surveys are not substantiated by research" (Desimone & Le Floch, 2004). The problems that are associated with surveys are also associated with most types of data collection that involve self-report or the interpretation of an observer or interviewer, or both (Groves et al., 2004). Further investigations comparing results in various study methods have shown that self-report surveys "can provide valid and reliable measures of classroom instruction and teacher experiences" (Desimone & Le Floch, 2004, p. 4). "Although e-mail survey methodology has a traditionally low rate of return, and there is some variation in the data quality, the advantages clearly outweigh the concerns" (Desimone & Le Floch, 2004, p. 5).

The sample

The cross-sectional survey was conducted using a purposive sample sent to the person indicated as the program leader of gifted students in all 178 districts and administrative units in Colorado, and the program leaders of gifted students in all 115 districts in the state of Idaho. Criteria for this non-random sampling technique were threefold: educators were in an administrative role, were experienced in working with gifted students, and were either in the state of

Colorado or Idaho. It was important to the purpose of the study to elicit participation by experienced educators of gifted students. Neither Colorado nor Idaho has a legislative mandate to require educators of their gifted students to have an endorsement to instruct or work with these exceptional students; therefore, the sample was restricted in order to control for experience in the identification process in lieu of the absence of endorsement criteria.

Idaho was selected because it is one of the ten states in the union with legislation that answers affirmative to the following three questions (See Appendix A): Is there an identification mandate? Is leadership included in the state definition of giftedness? Is there a mandate to serve students identified as gifted? Various factors determined the participation of the nine states that originally qualified for this study. The gifted program director in Kentucky declined participation stating Kentucky was not allowed to participate in any out-of-state surveys. Hawaii was considered to be too small with its student population of only 180,383 students to compare with Colorado that has 758,554 students according to 2006/2007 school year statistics (Davidson Institute, 2008). Texas, on the other hand, was considered too large with its 4,505,572 student population. The state gifted program director in Iowa did not respond to the request while the state gifted program director in Maryland preferred to work through the University of Maryland. Oklahoma was not considered because of philosophical differences in their strict three percent identification criteria requirement for gifted students against Colorado's more liberal philosophy that

allows a two to seven percent identification rate within each local controlled district. Oregon was eliminated because although they qualified on the three basic criteria, no gifted funding is available through the state. Wisconsin's gifted identification mandate went into effect in 2008 so no past experience could be established.

The target population was chosen recognizing the influence leaders of gifted educators have on the practices and attitudes of those who are responsible for the direct instruction of gifted students. This influence is important in determining the attitudes of a broader range of participants than individual responses might elicit and to exercise more control from unforeseen variables. It was determined that district directors or leaders were the most appropriate group to survey on identification practices because of their expertise in gifted education, their experience in working with gifted students and because not every district has a consistent cadre of specialized teachers for their gifted students and those districts would need to be controlled for in the survey. Those districts without a director were asked to send the survey to whomever was responsible for reporting for the gifted education department and who was responsible for the identification mandate in that district. Contact persons were identified from a listing obtained from the Colorado Department of Education Exceptional Student Leadership unit (Gifted & Talented department) and from a listing prepared by the state director of gifted and talented programs in Idaho.

Strengths and weaknesses

Surveys tend to be weak on validity and strong on reliability. “The artificiality of the survey format puts a strain on validity” (Barribeau et al., 2005). People’s real feelings are hard to grasp in dichotomous terms such as “agree/disagree” and they can only be approximates at best. Survey research is strong on reliability, however, as it presents all subjects with a standardized stimulus that eliminates a researcher’s subjectivity (Barribeau et al., 2005). Barribeau et al also believe research shows that respondents may answer more honestly with electronic surveys than with paper surveys or interviews but due to the open nature of most online networks, it is difficult to guarantee anonymity and confidentiality.

There is also a possible issue with external validity with online surveys. Some email accounts may be screened by an unintended viewer before they reach the intended viewer, or not be answered by the intended viewer at all. Every attempt was made to assure the survey submitted was taken by the intended recipient.

Questionnaire design

The Gifted Student Leadership Survey was designed by the researcher to reflect the skills referred to in the literature and the theories most often debated among noted researchers. The survey instrument was divided into three sections. Items listed in Part I, questions one through six, sought to identify perceptions in identifying gifted leadership attitudes towards the leadership identification

process. These questions were placed first so the respondent could immediately begin the heart of the survey thus capitalizing on the motivation of the respondent. Question one was used as a control question and establishes whether the educator believes that leadership abilities can be identified. The questions were closed-ended "which tend to be comparatively high on reliability" (Darity, 2008, p. 196) except for the ranking question six.

Question two asked the level of perception of confidence of the respondent in identifying leadership abilities. Questions three through five asked the perception of the level of leadership identification ability and/or support in the district where the respondent is employed. Question six asked the respondent to choose a preferred form of measurement format for leadership identification from the options of formal assessment, rating scale, or the use of observation. The possible responses for questions one through twenty-nine (with the exception of question number six) were given a value from one through five (1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, and 5 = strongly disagree). Neutral was chosen as an option to allow the participant to decide they were neither for nor against the question rather than requiring a positive or negative response when there was none.

Part II questions were specific to the constructs of leadership ability. Questions seven through twenty-five asked participants to define the leadership skills they believed were part of gifted leadership abilities. Questions seven through nine were designed to address philosophical questions establishing

whether the respondent believed in the nature or nurture aspects of leadership development. The questions also requested a response from the respondent's perception of the situational theory. Questions thirteen through twenty-five asked the respondent to identify the traits or skills they believe are exhibited by gifted leadership abilities. These skills were condensed from the literature. The thirteen characteristics include whether gifted student leaders volunteer for leadership tasks, take charge, excel at decision-making, embrace new challenges, are well liked by peers, influence their peers, excel in academics, show an interest in the welfare of others, are naturally competitive, are ambitious, reason critically, participate in most school activities, carry responsibility well, and possess the ability to evaluate self and their interrelation with situations and people—all expressed in the research literature. The questions were worded for the respondent to rate their degree of affirmation. An example is question thirty-nine which reads "I believe that students with gifted leadership abilities exhibit the ability to reason critically." The choices were given consistent ratings throughout the survey and were rated on a 5-point Likert scale with descriptive and numerical anchors (1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, and 5 = strongly disagree).

Questions twenty-six through twenty-eight asked respondents their perceptions of the efficacy of identifying gifted leadership abilities in elementary school, middle school and high school. Each question was worded similarly. For example question twenty-eight states "I believe that high school

(middle or elementary) students benefit when being identified with gifted leadership abilities." The answers to these questions were designed to reveal any discrepancies in philosophy towards the developmental nature of leadership constructs established as a theoretical framework.

Demographic information was solicited in Part III of the survey that sought to establish a baseline of education and experience in the respondents. It served as the categories for the data coding where numerical values to the responses were assigned. Surveys were coded between those from Colorado and Idaho. The data process concluded with testing of statistical significance measures.

The survey was web-based to aid in the administration and cost factors because of the distance involved with sending and collecting the surveys from Idaho. "The principal advantage of administration via post and the Internet is the comparatively low cost of the research vis-à-vis telephone and personal interviews" (Darity, 2008, p. 196). The electronic medium is also easily available in both Colorado and Idaho public education systems. Using one medium for the survey process strengthens the consistency of respondents. No paper copies were requested although respondents were informed paper copies were available upon request.

A descriptive analysis comparing means was made between the perceptions of directors experienced in the identification of leadership abilities who have had a mandate for several years in their state of Idaho and directors in

Colorado experienced in the identification of gifted abilities but who have not had a specific mandate to identify leadership abilities up until July 1, 2007. The *t* test was also used where appropriate to determine statistical significant differences. The study looked at any differences that were manifested between the two states and the information gathered here was used to make recommendations to the state of Colorado.

Pilot study

Prior to the initial distribution of the research questionnaire, a pilot study was conducted using twelve resource teachers of gifted and talented students. Construct validity was established by administering the pilot instrument to the representative sample employed as specialists in gifted education. Gifted and talented resource teachers in the Pikes Peak educational region in Colorado were asked to participate in the pilot study. The paper questionnaire was distributed and participants were asked to complete it by making comments on individual items where desired. The pilot was used to analyze clarity of question format and to measure whether the constructs were self-explanatory or needed further explanation. Twelve pilot surveys were returned, and after close evaluation, five of the survey questions were removed because of redundancy issues. One question was removed for lack of clarity and purpose and the other because it did not elicit a response consistent with the research questions. In addition, three questions were reworded for clarity purposes.

Survey Data Collection Procedure

The research instrument was a cross-sectional survey distributed via email to all district administrators responsible for gifted education in the states of Colorado and Idaho. Every effort was taken to not exclude any administrator because of lack of correct email address. Where necessary, the regional consultant in the state of Colorado was contacted for an updated email list. The state director in Idaho was willing to send the email database for the study but preferred using the district superintendent as the primary contact since many of the school districts in Idaho do not have a primary administrator listed for gifted student services. A software system was used to track participants who did not respond the first time so a second and third survey request could be sent. Two weeks after the requested return date a follow-up request was made to participants who had not responded. Three weeks after this an additional email was sent to all participants who still had not responded or returned the surveys with incomplete data. A thank you note was sent to all who participated at that time through the Vovici Software System (1997). An additional email was sent to the seven regional consultants in Colorado requesting they pass along the survey link to all administrators of gifted students in their regional database to increase survey response rate.

Data Analysis

Data analysis procedures were determined by the research questions related to specific survey questions. Research question one, “What were the

attitudes and perceptions of administrators of gifted student programs in K-12 school districts in Colorado in the identification of students gifted in leadership abilities?" was the overarching question of the study. A brief discussion was held around the descriptive statistical results of the control question number one, "I believe a student can be identified gifted in leadership abilities."

Research question two was "What were the attitudes and perceptions of administrators of gifted student programs in K-12 school districts in Idaho in the identification of students gifted in leadership abilities?" This question sought to gather data related to Idaho to set up a comparison to Colorado.

"Were there significant differences in the attitudes and perceptions in the identification of students gifted in leadership abilities in administrators of gifted student programs in Colorado and Idaho?" was the third research question in the study. Means comparisons were made and descriptive proportions were indicated. For cluster questions 7-25 (leadership skills) means were computed and compared between the two states.

Research question four asked, "Were there significant correlations between foundational leadership philosophies and leadership assessment preference used in identifying students gifted in leadership abilities?" This question necessitated two separate statistics. First, for question six that asked about preferences for selecting the types of measures used in leadership identification, descriptive statistics were established and the results were ranked. Then, taking the results from the proportions generated for the foundational

beliefs, a correlation coefficient was run to see if there was a statistical correlation between measurement preference and foundational beliefs between means and standard deviation.

Research question five, “Were there significant relationships between foundational leadership philosophies and perceptions of gifted leadership abilities?” explored the philosophical construct of nature, whether a student is born with leadership abilities, and nurture, whether gifted leadership abilities are developmental. There was also a brief discussion on whether gender differences affect assessment preference.

Limitations of the Study

An obvious limitation of this research was the limited numbers of the sample size. Johnson and Christensen (2004) state “The ability to generalize from a sample to a population on the basis of a single research study is severely limited” (p. 215). However, Desimone and Le Floch (2004) observe that “Small-scale studies, however, offer opportunities for more in-depth data collection” (p. 3). And research has shown “the most important characteristic of a sample is its representativeness, not its size” (Ary et al., 1996, p. 182). Recognizing the absence of a gifted endorsement mandate in school districts in Colorado, this study was restricted to administrators or department leaders of gifted education programs to increase the expertise and to purposively narrow the experience field of the respondents increasing the potential representativeness of the sample.

Another limitation was the inability to generalize findings to identification processes of gifted students. This survey used a non-probability sampling and therefore is not acceptable for generalizing to the population (Key, 1997). The survey was an expert purposive study of perceptions and was not intended to provide valid assessment of reliable constructs for identifying students gifted in leadership abilities.

A third limitation of the study was that the survey was restricted to the states of Colorado and Idaho. The two states are uneven in size; Colorado has 178 districts and Idaho 115. This is a 35% discrepancy and may include additional intervening variables. At a 51% return rate the study results could generalize to the two states but the generalization abilities of the study was limited as a sample representative of the United States as a whole.

CHAPTER IV

Results of the Study

The results of the Gifted Student Leadership Survey are presented in chapter four. The data were analyzed according to the leadership constructs established in the literature review and summarized according to the research questions created for the study. Research demographic information pertinent to the sample was described first.

Research Population

Survey data were collected from administrators experienced in the identification of gifted K-12 students from the States of Colorado and Idaho. The population was identified in Colorado from separate regional listings provided by the State Gifted and Talented Director for the 178 school districts. The State of Idaho Gifted and Talented Director sent individual School District Superintendents the web-based survey link and were asked to pass the link to their gifted education specialists in their 115 school districts. A total of 293 potential respondents were contacted. A final response percentage of 51% was eventually obtained after three additional response requests were sent through the survey software. The survey was sent initially November 29th, 2008, and was closed January 31st, 2009. Returns were statistically similar to the target

demographic number of districts in each state. The total return rate of 51% is described and represented by Table 1.

Table 1
Survey Return Rate by State

State	n (Districts)	n (Returned)	% return by state	% of total
Colorado	178	92	51.7	60.9
Idaho	115	59	51.3	39.1
Total	293	151	51.5	100%

Descriptive Data of the Respondents

The Gifted Student Leadership Survey was emailed to all K-12 public school districts in both Colorado and Idaho. The respondents were typical of the demographic makeup of administrators in K-12 public schools as female respondents (n=106, 70.2%) outnumber male respondents (n=45, 29.8%). The percentage of teaching experience in respondents increases in each successive category. Expected are the results that indicate a high education level in the respondents. Table 3 illustrates the descriptive data for respondents in these categories.

Table 2
Descriptive Data of the Respondents: Part I

Gender	Frequency	Percent
Female	106	70.2
Male	45	29.8
	N=151	100
Number of Years Teaching	Frequency	Percent
1-2 Years	1	0.7
3-5 Years	8	5.4
6-10 Years	17	11.4
11-15 Years	33	22.1
16 or more Years	90	60.4
	N=149	100
Educational Level	Frequency	Percent
Bachelor's Degree	3	2.0
Some Graduate	13	8.6
Master's Degree	36	23.8
Some post-master's	75	49.7
Doctorate Degree	24	15.9
	N=151	100

The survey sought to establish the expertise of the respondent. The respondent was asked how many years his or her job description specifically designated gifted and talented students which includes teaching and administrative positions (question 31). Coupled with that question, the respondent was asked how many years he or she has been a director (coordinator or lead administrator / facilitator / teacher) of gifted education (question 34) and how many years he or she has had his or her job title (question 35). The survey questions sought different information to separate teaching years and administration years. When "number of years in current position" was factored independently, the extraction numbers were >.741 for respondents with sixteen

or more years experience and >0.611 for zero years indicating the variables fit well and should be included in the analysis.

Finally, the respondent was asked whether he or she was endorsed as a gifted education specialist in his or her specific State (question 34). Twenty-two percent of respondents reported being endorsed by their state. This low percentage is an expected result as endorsement is not mandated in either state.

Table 3
Descriptive Data of the Respondents: Part II

Years in Gifted Education	Frequency	Percent
1-2 Years	18	11.9
3-5 Years	41	27.1
6-10 Years	33	21.9
11-15 Years	29	19.2
16 or more Years	30	19.9
	N=151	100
Director Position	Frequency	Percent
0 Years	35	23.2
1-2 Years	35	23.2
3-5 Years	35	23.2
6-10 Years	18	11.9
11-15 Years	17	11.3
16 or more Years	11	7.2
	N=151	100
Job Title	Frequency	Percent
Regular Classroom Teacher	9	6.0
Gifted Classroom Teacher	9	6.0
Gifted Resource Teacher	18	12.0
Gifted Department Head	17	11.2
Gifted Program Director	85	56.2
No answer	13	8.6
	N=151	100
Endorsed by State	Frequency	Percent
Not Sure	2	1.3
No	115	76.7
Yes	33	22.0
	N=150	100

Survey Results

The attitudes and perceptions of administrators of gifted students were polled in both Colorado and Idaho in K-12 school districts in the identification of students gifted in leadership abilities. Items were rated on a 5-point Likert scale with descriptive and numerical anchors (1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, and 5 = strongly disagree). Any score that received a mean of less than three points is skewed towards an "agree" or "strongly agree" rating whereas any score that received more than three points is skewed towards a "disagree" or "strongly disagree" preference. A Cronbach's Alpha was run on twenty-six survey questions (demographic questions were omitted). The alpha was positive but at .570 was not close enough to .70 or .80 to indicate high reliability. When a Guttman Split-half coefficient was computed, the Cronbach's Alpha improved to .742 indicating a high reliability among the items.

The survey asked administrators of gifted students to respond whether they believe the identification of gifted leadership abilities in K-12 students is possible (survey question #1.) The question sought to establish reliability in the respondents towards their attitude in selecting leadership skills and assessments. Colorado administrators responded 82% 'strongly agree' and 'agree' to 3% 'disagree' for a mean score of 1.80 indicating a strong 'agree' rating. There were

14% responses with a selection of ‘neutral’ with no ‘strongly disagree’ responses.

Table 4
Belief Question 1: Colorado

Response	n	%	N (%)
Strongly agree	37	40	37 (40)
Agree	39	42	76 (82)
Neutral	13	14	89 (96)
Disagree	3	4	92 (100)
Strongly disagree	0	—	
Total	92	100	

Note. Mean = 1.80; Median = 2.00; SD = .80

Survey question two surveyed administrators on their confidence level in identifying students gifted in leadership abilities. This question was important to establish the confidence level in Colorado gifted specialists. Only 8.7% of Colorado educators ‘strongly agree’ they were confident but 36.9% chose ‘agree’ they are confident in their identification abilities for a combined total of 45.6% and a mean score of 2.63. A large number of respondents (37.0%) responded neutral to this question. The rest (17.4%) responded ‘disagree’ with their confidence to identify students with gifted leadership abilities. No respondents felt strongly against their ability. A mean of 2.63 with a standard deviation of .87 suggests Colorado respondents are only slightly confident in their ability to identify gifted leadership abilities. Table 5 describes these data.

Table 5
Confidence level of Respondents: Colorado

Response	n	%	N / %
Strongly Agree	8	8.69	8 / 8.69
Agree	34	36.95	42 /45.64
Neutral	34	36.95	76 / 82.59
Disagree	16	17.41	100
Strongly Disagree	0	0	
Total	92	100	

Note: Mean = 2.63; Median = 3.00; SD = .87

Survey question six asked respondents to choose the type of measurement they believed was the best way to identify gifted leadership abilities. They were asked to rank three different types of assessments: Rating scale, observation, or formal assessment. Gifted education administrators in Colorado preferred a rating scale 50.5%, observation 31.9%, and a formal assessment 17.6%. Table 6 describes these data in rank order.

Table 6
Leadership Assessment Preferences: Colorado

Measurement	Colorado Ranking	Preference n / %	Cumulative N / %
Rating Scale	1	46 / 50.5	46 / 50.5
Observation	2	29 / 31.9	75 / 82.4
Formal Assessment	3	16 / 17.6	91 / 100
Total		91 / 100	

Survey questions seven through twenty-five asked gifted administrators to respond to preferences of twelve different leadership skills and seven constructs. The lower the mean, the stronger is the positive preference rating. Each skill is identified by the question number and topic, the corresponding percentages, and the standard deviation (SD). Colorado gifted administrators agreed with all but two skills and two constructs. Those questions that received a score < 3.00 indicating a 'disagree' response are Q15, 'students tend to take charge and/or dominate' (M=3.01), Q20, 'gifted leaders also excel in academics' (M=3.09), Q13, 'gifted leaders display leadership skills in any situations' (M=3.64), and Q12, 'only academic students display gifted leadership abilities' (M=4.12). The results are displayed on table 7.

Table 7
Leadership Abilities Skills & Constructs: Colorado

I believe…	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	M	SD
Q7. Born with abilities	40.2	42.4	14.4	3.2	0	2.63	0.94
Q8. Abilities are developed	29.4	63.1	6.5	1.0	0	1.75	0.58
Q9. Any Student can develop	6.56	17.5	29.4	42.4	4.3	3.21	1.00
Q10. Only academic gifted	5.5	1.0	5.5	52.2	35.8	4.12	0.97
Q11. Identify potential only	8.7	40.2	23.9	22.8	4.4	2.74	1.05
Q13. Lead in any situation	6.6	7.7	7.7	72.5	6.6	3.64	0.96
Q14. Responsible/Dependable	7.7	44.4	28.8	18.8	0	2.59	0.89
Q15. Take Charge/Dominate	2.2	34.0	28.6	34.0	1.0	3.01	0.87
Q16. Excel at making decisions	13.0	60.8	18.6	5.5	1.0	2.21	0.78
Q17. Embrace new initiatives	13.0	57.1	23.0	5.5	1.0	2.24	0.79
Q18. Are well-liked/confident	2.2	39.1	47.8	10.8	0	2.67	0.70
Q19. Are influential	21.7	67.4	8.7	2.2	0	1.91	0.62
Q20. Also excel in academics	2.2	18.7	48.4	27.5	2.2	3.09	0.80
Q21. Welfare of others	8.7	30.4	47.8	11.9	0	2.63	0.81
Q22. Are energetic & ambitious	7.6	52.1	31.5	8.7	0	2.41	0.76
Q23. Exhibit critical reasoning	8.7	63.0	23.9	4.3	0	2.24	0.67
Q24. Ability to evaluate	13.0	60.4	23.0	3.3	0	2.16	0.69
Q25. Communication skills	19.6	63.0	13.0	4.3	0	2.02	0.71

The survey asked administrators in Idaho to respond to whether they felt the identification of gifted leadership abilities in K-12 students is possible. Idaho respondents agreed 74.6% that the identification of gifted leadership abilities in K-12 students is possible for a mean score of 2.10. Almost half, 42.4%, chose 'agree' and 32.2% chose 'strongly agree' in answer to survey question one.

Table 8
Belief Question 1: Idaho

Response	n	%	N / %
Strongly agree	19	32	19 (32)
Agree	25	42	44 (74)
Neutral	5	8	49 (82)
Disagree	10	18	59 (100)
Strongly disagree	0		
Total	59	100	

Note: Mean = 2.10; Median = 2.00; SD = 1.05

The response to question two, "I am confident in my ability to identify a student gifted in leadership abilities" was reported at 13.8% 'strongly agree' and 55.2% 'agree' for Idaho respondents. This is a strong 69% agree response rate. Only 5.1% responded with a 'disagree.' A mean score of 2.22 suggests Idaho respondents agreed they were confident in their ability to identify gifted leadership abilities.

Table 9
Confidence Level of Respondents: Idaho

Response	n	%	N (%)
Strongly Agree	8	13.8	8 (13.8)
Agree	32	55.2	40 (69.0)
Neutral	15	25.9	55 (94.9)
Disagree	3	5.1	58 (100)
Strongly Disagree	0	0	
Total	58	100	

Note. Mean = 2.22; SD = .75

Idaho respondents were asked in question six to choose the type of measurement they believed to be the best assessment to identify gifted leadership abilities. The three different types of assessments in rank order were reported as Observation 56.1%, Rating Scale 28.1%, and formal leadership assessment 15.8%.

Table 10
Leadership Assessments Preferences: Idaho

Measurement	Idaho Rank	Preference n / Percent	Cumulative Percent
Rating Scale	1	16 / 28.1	28.0
Observation	2	32 / 56.1	84.1
Formal Assessment	3	9 / 15.8	100

Questions seven through twenty-five asked gifted administrators in Idaho to respond to preferences of nineteen different leadership skills and constructs. The lower the mean, the stronger is the positive preference rating. Each skill is identified by the question number, topic, the corresponding

percentages, and the standard deviation (SD). Idaho respondents agreed in the questions surveyed except for two questions: Q13, 'gifted leaders display leadership in any situation' (M=3.07), and Q10, 'only academically gifted students display gifted leadership abilities' (M=3.80).

Table 11
Leadership Abilities Skills and Constructs: Idaho

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	M	SD
Q7. Born with abilities	8.5	44.1	30.5	13.5	3.4	2.59	0.95
Q8. Abilities are developed	5.1	57.6	23.7	11.8	1.6	2.47	0.84
Q9. Any Student can develop	25.8	24.1	15.5	29.3	5.2	2.64	1.29
Q10. Only academic gifted	15.3	5.1	44.1	10.2	33.9	3.80	1.35
Q11. Identify potential only	10.3	36.2	20.1	29.3	3.4	2.79	1.09
Q13. Lead in any Situation	23.7	13.8	10.3	37.9	15.5	3.07	1.45
Q14. Responsible/Dependable	20.3	42.4	23.7	13.6	0	2.31	0.95
Q15. Take Charge/Dominate	13.6	35.6	22.0	27.1	1.7	2.68	1.07
Q16. Excel at making decisions	8.5	40.7	35.6	13.6	1.7	2.59	0.89
Q17. Embrace new initiatives	8.5	52.5	27.1	8.5	1.7	2.44	0.86
Q18. Are well-liked/confident	1.7	10.2	45.8	33.9	8.5	2.37	0.85
Q19. Are influential	18.6	50.8	25.4	5.0	0	2.17	0.79
Q20. Also excel in academics	6.9	43.1	32.8	17.2	0	2.60	0.86
Q21. Welfare of others	11.9	42.4	35.6	10.2	0	2.44	0.84
Q22. Energetic & ambitious	8.5	55.9	28.8	6.8	0	2.34	0.74
Q23. Exhibit critical reasoning	3.4	44.1	39.0	11.9	1.7	2.64	0.84
Q24. Ability to evaluate	5.1	64.4	18.6	10.2	1.7	2.39	0.81
Q25. Communication skills	10.2	64.4	16.9	8.5	0	2.24	0.75

To compare perceptions in leadership identification in Colorado to Idaho, means were compared. For question one, “I believe a student can be identified gifted in leadership abilities” a Colorado mean of 1.80 was compared to Idaho mean of 2.10. The mean was also compared for question two that asked for perceptions in confidence of the respondents to identify gifted leadership abilities with a mean score of 2.63 for Colorado compared with the mean score of 2.22 for Idaho. A *t* test to compare means for question one of -1.862 with a significance of .051 > .05 indicates no significant difference. A *t* test to compare means for question two shows of 2.93 with a significance of .004 < .05 indicates a significant difference in the means. This suggests Colorado administrators are less confident than Idaho in identifying gifted leadership abilities. Table 12 displays these data.

Table 12
Questions 1 and 2 Comparisons: Colorado and Idaho

State		Q1: Belief	Q2: Confidence
Colorado	Mean	1.80	2.63
	Median	2.00	3.00
	SD	.80	.87
	n	92	92
Idaho	Mean	2.10	2.22
	Median	2.00	2.00
	SD	1.04	.75
	n	59	59
	t	-1.97	3.03
	df	149	148
	sig	.051	.004*
	confidence	-.595 / .001	.141 / .671

Note. *Data indicates a significant difference at .05

Means were also compared between Colorado and Idaho for the leadership skills polled in the survey and a *t* test was used to compare differences. Significant differences were found between the two states for Q8, Q9, Q13, Q16, Q19, and Q23. Table 13 shows the means, *t* test, significance, and confidence intervals at the 95% confidence level.

Table 13
Leadership Abilities Skills & Constructs Comparisons: Colorado and Idaho

Traits	Colorado	Idaho			95% confidence	
	M	M	t	sig	Lower	Upper
Q7. Born with abilities	2.63	2.59	.210	.946	-.278	.345
Q8. Abilities are developed	1.79	2.47	-5.410	.001[0]	-.931	-.431
Q9. Any Student can develop	3.21	2.64	3.021	.001[0]	.173	.964
Q10. Only academic gifted	4.12	3.80	1.593	.007	-.079	.725
Q11. Identify potential only	2.74	2.79	-.303	.587	-.406	.298
Q13. Lead in any Situation	3.64	3.07	2.688	.000[0]	.149	.997
Q14. Responsible/Dependable	2.59	2.31	1.857	.810	-.018	.586
Q15. Take Charge/Dominate	2.98	2.68	1.775	.030	-.035	.635
Q16. Excel at making decisions	2.21	2.59	-.2728	.029[0]	-.668	-.106
Q17. Embrace new initiatives	2.24	2.44	-1.453	.215	-.469	.077
Q18. Well-liked / confident	2.67	2.37	2.375	.133	.051	.551
Q19. Are influential	1.91	2.17	-2.106	.010[0]	-.498	-.015
Q20. Also excel in academics	3.09	2.60	3.455	.063	.212	.757
Q21. Welfare of others	2.63	2.44	1.389	.630	-.080	.460
Q22. Energetic & ambitious	2.41	2.34	.593	.548	-.173	.321
Q23. Exhibit critical reasoning	2.24	2.64	-3.218	.022[0]	-.654	-.156
Q24. Ability to evaluate	2.16	2.39	-1.824	.084	-.469	.019
Q25. Communication skills	2.02	2.24	-1.758	.151	-.455	.024

Note. [0] Significance <.05 and confidence interval does not contain "0" indicating significant differences.

When the perceptions of leadership skills were ordered in 'agree strength' according to means (the lower the mean the stronger the agree

strength) closer comparisons were made. Both states place the skills of influence and communication one and two consecutively. Both states have question 15 "take charge/dominate" closest to neutral. Both Colorado and Idaho disagree that gifted leaders lead in any situation agreeing with the situational theory. A line in the table marks the numeracy that places the mean to the "disagree" side of the data. Table 14 displays the mean order of the skills by state.

Table 14
Skills Perceptions in Rank Order: Colorado and Idaho

Rank	Colorado	M	Idaho	M
1	Q19: Influential	1.91	Q19: Influential	2.17
2	Q25: Communication Skills	2.02	Q25: Communication	2.24
3	Q24: Evaluation of Self & Others	2.16	Q14: Responsible/Dependable	2.32
4	Q16: Decisions/Problem Solve	2.21	Q22: Ambitious	2.34
5	Q17: Embrace New Initiatives	2.24	Q18: Well-liked/Confident	2.37
6	Q23: Critical Reasoning	2.24	Q24: Evaluation of Self & Others	2.39
7	Q22: Ambitious	2.41	Q17: Embrace New Initiatives	2.44
8	Q14: Responsible/Dependable	2.59	Q21: Welfare of Others	2.44
9	Q21: Welfare of Others	2.63	Q16: Decisions/Problem Solve	2.59
10	Q18: Well-liked/Confident	2.67	Q23: Critical Reasoning	2.64
11	Q15: Take Charge/Dominate	2.98	Q15: Take Charge/Dominate	2.68
12	Q13: Lead in any Situation	3.64	Q13: Lead in any Situation	3.07

In survey question six, three types of leadership measurements were offered as choices to the survey respondents. Comparisons of counts and proportions were done between States. Colorado respondents prefer to use a Rating Scale (50.5% to 28.2%) whereas Idaho respondents prefer using an Observation assessment (56.1% to 31.9%). Compared overall, 41.9% respondents preferred using a Rating Scale but the Observation assessment statistic was close at 41.2%. A formal assessment was preferred by only 16.9% of all respondents. A *t* test for significance showed no difference at the .05% level. A Spearman's rho correlation calculated significance at .05 indicating the correlation is significant and the variables of state and assessment preference are linearly related.

Table 15
Assessment Rankings by State

Assessments	Colorado n (%) of State	Idaho n (%) of State	Total N (%)
Rating Scale	46 (50.5)	16 (28.2)	62 (41.9)
Observation	29 (31.9)	32 (56.1)	61 (41.2)
Formal Assessment	16 (17.6)	9 (15.8)	25 (16.9)
Total	91 (100)	57 (100)	148 (100)

Note: Spearman's rho sig = .05 = .05
t = -1.692 0.092 > 0.05 lower = .448 / upper = .034

To further test attitudes of respondents to their preference of leadership assessments against basic leadership philosophies, descriptive statistics were compared between preference type and five questions designed to test philosophical skills constructs. The questions are divided into two basic categories. Survey question seven states “I believe students are born with gifted leadership abilities” and survey question ten which states “I believe only academically gifted students can develop gifted leadership abilities” which reflects the inherent or nature philosophy of giftedness. The other questions, survey question eight which states “I believe gifted leadership abilities are developed…” survey question nine which states “I believe any student can develop gifted leadership abilities…” and survey question eleven which states “I believe students can only be identified with gifted leadership potential that has to be targeted and developed” all address the nurture philosophy of giftedness. When performing an independent samples *t* test between the Rating Scale (preferred by Colorado) and Observation method (preferred by Idaho), the results for each question show a significance > .05 for every question indicating there is no significant difference between the group means. A Kendall’s tau_b correlation of .632 for Q7 (birth) and .279 for Q10 (academic only) show no correlation between the means for assessment preference and nature philosophy. A correlation of 1.00 for Q8 (develop), .866 for Q9 (anyone), and .902 for Q11 (targeted) shows a strong correlation between the means for assessment preference in the nurture philosophy and the leadership construct surveyed.

Table 16

Leadership Assessments and Philosophical Traits Comparisons

	Assessment	n	M	SD	SE	t	sig	95%
NATURE								
Q7: Birth	Rating Scale	61	2.52	.91	.12			
	Observation	61	2.72	.97	.12			
	Formal	25	2.56	.96	.19			
	Total	147	2.61	.94	.08	-1.16	.249	-.53/.14
						Correlation		.626
Q10: Only Academic	Rating Scale	62	4.11	1.01	.13			
	Observation	61	3.89	1.29	.17			
	Formal	25	3.88	1.09	.22			
	Total	148	3.98	1.15	.09	1.09	.279	-.19/.64
						Correlation		.289
NURTURE								
Q8: Develop	Rating Scale	62	2.01	.71	.09			
	Observation	61	2.11	.79	.10			
	Formal	24	2.04	.89	.18			
	Total	148	2.06	.78	.06	-.72	.471	-37/.17
						Correlation		1.00
Q9: Anyone	Rating Scale	62	3.09	1.14	.14			
	Observation	61	2.70	1.12	.14			
	Formal	24	3.42	1.10	.22			
	Total	147	2.99	1.15	.09	1.93	.057	-.01/.79
						Correlation		.866
Q11:Targeted Potential	Rating Scale	62	2.69	1.11	.14			
	Observation	60	3.00	1.03	.13			
	Formal	25	2.44	.91	.18			
	Total	147	2.78	1.06	.09	-1.59	.116	-.68/.08
						Correlation		.902

Note. The full questions…
Q7: I believe students are born with gifted leadership abilities.
Q10: I believe only academically gifted students can develop gifted leadership abilities.
Q8: I believe gifted leadership abilities are developed as a student learns.
Q9: I believe *any* student can develop gifted leadership abilities with proper instruction.
Q11: I believe K-12 students can only be identified with leadership **potential** and that it has to then be targeted and developed.

The survey explored the factors that might have a significant relationship in the identification of gifted leadership abilities. One of the leadership philosophical debates in literature is whether gifted leadership abilities are inherent at birth (nature) or whether the potential for leadership abilities can be developed as a student learns (nurture). Statistics were run separate from assessment preference (Table 17). Question seven addresses the nature philosophy: “I believe students are born with gifted leadership abilities” whereas question eight addresses the nurture philosophy: “I believe gifted leadership abilities are developed as a student learns.” The lower the means indicates stronger belief. A *t* test of significance of $0.83 > .05$ indicates no group differences in the belief in the ‘nature’ philosophy (Birth) between the two states but a significance of $0.00 < .05$ indicates significant differences in belief in the ‘nurture’ philosophy (Developed) between the two states.

Table 17
Perceptions of Nature (Birth) versus Nurture (Developed)

State		Q7: Nature (Birth)	Q8: Nurture (Developed)
Colorado	M	2.63	1.79
	Median	2.00	2.00
	SD	.94	.60
	n	91	92
Idaho	M	2.59	2.47
	Median	2.00	2.00
	SD	.95	.84
	n	59	59
Total	M difference	.03	-.68
	SE difference	.16	.13
	t	.210	-5.41
	sig	.83	.00*
	interval	-.28 / .34	-.93 / -.43
	N	150	150

Note: *Indicates a significant difference at the .05 level

Skills questions 14 through 25 were evaluated against philosophical belief. Question 7 “I believe students are born with gifted leadership abilities” was used as the nature, or birth philosophy question. Question 8 “I believe gifted leadership abilities are developed as a student learns” was used as the nurture, or developmental question. For the nature philosophy, a significant correlation at the 95% level was found in only question 23, the ability to reason critically. Of the 12 skills surveyed, seven questions showed correlation to the nurture philosophy.

Table 18
Philosophy and Skills Correlations

		Nature (Birth) Pearson / Sig	Nurture (Develop) Pearson / Sig
Q22:	Ambitious	.13 / .129	.12 / .138
Q25:	Communicates	.05 / .540	.29 / .000**
Q14:	Dependable	.08 / .325	-.12 / .161
Q15:	Dominates	.04 / .621	-.24 / .003**
Q24:	Evaluative	.10 / .219	.16 / .027*
Q20:	Excels	-.12 / .144	-.22 / .006**
Q19:	Influences	.09 / .279	.38 / .000**
Q17:	Initiative	.08 / .312	.32 / .000**
Q21:	Others	-.07 / .404	-.06 / .444
Q16:	Problem Solve	.14 / .082	.13 / .111
Q23:	Reason Critically	.20 / .015*	.19 / .021*
Q18:	Well-liked	.08 / .307	-.05 / .173

*. Correlation is significant at the 0.05 level
**. Correlation is significant at the 0.01 level

In an effort to ascertain whether the school districts questioned established leadership programs at different educational developmental levels, districts were asked whether they already had in place an appropriate leadership development program at each level: elementary, middle, and high school (questions 3, 4, and 5 consecutively). The data show a decrease in mean scores indicating a stronger “agree” choice with the increase in academic levels. Administrators report a mean of 3.59 for establishing an appropriate leadership programs in elementary school indicating a “disagree” choice with a mean of 3.29 for middle schools. The mean score for appropriate leadership programs for high schools of 2.80 places the choices only slightly on the “agree” side. These data demonstrate low numbers of established leadership programs at all levels

and the belief that what is in place is not adequate at this time. They also show that leadership programs currently exist mostly at the high school level.

Table 19
Educational Levels of Established Leadership Programs

Level	N	M	SD
Elementary	149	3.59	1.14
Middle School	148	3.29	1.12
High School	146	2.80	1.22

To further test the developmental philosophy, questions 27, 28 and 29 asked administrators to indicate their belief in whether elementary school, middle school, or high school students benefit when being identified with gifted leadership abilities. A crosstabs was run to compare counts and means were also compared. Results again show a slight decrease in means from elementary to high school (showing more strength towards “agree”) which is verified by an increase in percentage of “strongly agree” and “agree” cumulative scores. In testing whether administrators believe elementary school students would benefit from being identified in gifted leadership abilities, “strongly agree” and “agree” choices show a cumulative percent of 62%. Belief in middle school students’ cumulative percentage points of “strongly agree” and “agree” are 79% and for high school students are 83%. These results can be interpreted as a slight preference for programs at higher grade levels for both Colorado and Idaho and

do not give strength to a belief that developing leadership abilities at younger grades are more beneficial. A Cronbach's Alpha run on the three level questions with a result at .801 indicates a high reliability in these statistics.

Table 20
Comparisons in Perceptions of School Level Benefits

	Elementary n (%)	Middle School n (%)	High School n (%)
Strongly Agree	17 (12)	30 (20)	48 (33)
Agree	73 (50)	88 (59)	73 (50)
Neutral	44 (30)	22 (15)	14 (10)
Disagree	10 (7)	7 (5)	10 (7)
Strongly Disagree	2 (1)	2 (1)	2 (1)
Total N	146	149	147
Means	2.36	2.08	1.95

To test whether the developmental theory of identification manifests in educational levels, administrators were asked whether educators of gifted students believe identifying leadership giftedness is more appropriate in the various education levels; high school, middle school, or elementary school. The questions compared are those that question a developmental versus an inherent theory. The inherent question is question seven which states "I believe students are born with gifted leadership abilities." Developmental questions are question eight "I believe gifted leadership abilities are developed as a student learns" question eleven "I believe K-12 students can only be identified with leadership **potential** and that it has to then be targeted and developed" and question nine which states "I believe *any* student can develop gifted leadership abilities with

proper instruction." Each case is similar and no significant trend between the four independent variables is evident indicating preferences for a benefit in leadership identification for elementary, middle, or high school is not dependent upon philosophical constructs.

Table 21
Philosophical Beliefs and School Level Comparisons

	Q7: Birth	Q8: Develop	Q9: Anyone	Q11: Targeted
Elementary School				
M	2.60	2.06	3.01	2.74
Median	2.00	2.00	3.00	3.00
SD	.95	.76	1.16	1.05
Variance	.91	.58	1.32	1.11
Skewness	.54	.93	-.37	.20
N	145	146	145	145
Middle School				
M	2.61	2.06	3.00	2.77
Median	2.00	2.00	3.00	3.00
SD	.94	.78	1.15	1.06
Variance	.89	.61	1.33	1.13
Skewness	.52	.93	-.38	.19
N	148	149	148	148
High School				
M	2.61	2.06	3.00	2.75
Median	2.00	2.00	3.00	3.00
SD	.95	.79	1.16	1.06
Variance	.90	.62	1.34	1.12
Skewness	.51	.92	-.38	.23
N	146	147	146	146

Note. Full questions…
Q7: I believe students are born with gifted leadership abilities.
Q8: I believe gifted leadership abilities are developed as a student learns.
Q9: I believe *any* student can develop gifted leadership abilities with proper instruction.
Q11: I believe K-12 students can only be identified with leadership **potential** and that it has to then be targeted and developed.

Questioning whether gender differences affected perceptions, a descriptive test was run for the first question "I believe it is possible to identify

gifted leadership abilities" against gender statistics. According to gender, 82.3% males (M = 1.89) and 78.3% females (M = 1.93) believe students can be identified gifted in leadership abilities. An independent-samples *t* test (p = .782 >.05) indicates there is no significant difference between the two group means for question one. The confidence interval also contains zero which also indicates no significant difference.

Table 22
Belief Question One Comparing Gender Differences

	Gender		Total
Counts	Male n (%)	Female n (%)	N (%)
Strongly Agree	16 (35.5)	40 (37.7)	56 (37.0)
Agree	21 (46.5)	43 (40.6)	64 (42.4)
Neutral	5 (11)	13 (12.3)	18 (12)
Disagree	3 (7)	10 (9.4)	13 (9)
Total	45 (100)	106 (100)	151 (100)
M	1.89	1.93	1.92

F	t	df	Sig.	M Difference	M SE	95% confidence lower	upper
.459	-.277	149	.782	-.05	.16	-.367	.277

Gender differences were apparent in showing preference for the type of leadership assessment in two of the three assessments. Females preferred a Rating Scale 49.0% against a male preference score of 25.0%. Males preferred using the Observation method 45.5% whereas the proportion of females who

preferred the Observation method was 39.4%. The proportion of males 8.8% within gender was almost equal to the proportion of females 8.1% within gender in determining preference for the Formal Assessment. When comparing means a *t* score of 3.323 with a Significance of .001 < .05 indicate a significant difference in means.

Table 23
Preference for Assessment Type by Gender

Assessment		Gender		Total
		Male	Female	
Rating Scale	n	11	51	62
	% within gender	25.0%	49.0%	41.9%
	% of total	7.4%	34.5%	41.9%
Observation	n	20	41	61
	% within gender	45.5%	39.4%	41.2%
	% of total	13.5%	27.7%	41.2%
Formal Assessment	n	13	12	25
	% within gender	29.5%	11.5%	16.9%
	% of total	8.8%	8.1%	16.9%
Total	Count	44	104	148
	% within gender	100%	100%	100%
	% of Total	29.7%	70.3%	100%

Preference	F	t	df	Sig.	M Diff	SE	95% confidence
	.563	3.32	146	.001	.42	.13	.170 / .671

Research Questions

The study on the perceptions of gifted administrators in Colorado and Idaho was structured around five research questions. For these analyses, a .05 level of significance was used.

Research question #1

What were the attitudes and perceptions of administrators of gifted student programs in K-12 school districts in Colorado in the identification of students gifted in leadership abilities?

Tables 4 through 7 present the descriptive responses from Colorado respondents. Tables 4 and 5 suggest Colorado respondents believed it is possible to identify gifted leadership abilities (M=1.80) and were confident in their ability to identify gifted leadership abilities (M=2.63). The differences in assessment preferences were significant showing more than half preferring a rating scale to make that determination (50.5%). Colorado administrators agree that 14 of 18 skills surveyed belong in the definition of gifted leadership abilities.

Research question #2

What were the attitudes and perceptions of administrators of gifted student programs in K-12 school districts in Idaho in the identification of students gifted in leadership abilities?

Tables 8 through 11 present the descriptive responses from Idaho respondents. Tables 8 and 9 suggest Idaho respondents believed it is possible to identify leadership abilities (M=2.10) and were confident in their ability to identify gifted leadership abilities (M=2.22). The differences in assessment preferences were significant showing more than half preferring an observation method to make that determination (56.1%). Idaho administrators agree that 16 of 18 skills surveyed belong in the definition of gifted leadership abilities.

Research question #3

Were there significant differences in the attitudes and perceptions in the identification of students gifted in leadership abilities in administrators of gifted student programs in Colorado and Idaho?

Tables 12 - 15 compared the responses of Colorado and Idaho. Colorado agreed more strongly that it is possible to identify gifted leadership abilities (Colorado M=1.80 compared to Idaho M=2.10. Idaho respondents were more confident in their ability (Idaho M=2.22 compared to Colorado M=2.63). Colorado and Idaho agreed in the approximate ranking of the leadership constructs polled placing two skills last in rank order; both disagreeing that leaders lead in any situation and that only academic gifted students possess gifted leadership abilities.

A Spearman's rho correlation of .050 indicated a significant correlation between the variables of state and assessment preference where Colorado

preferred using a rating scale (50.5% > 28.3%) whereas Idaho preferred using an observation method (56.1% > 31.9%).

When a *t* test for independent samples was run to determine statistical differences between preferences of assessments against philosophical beliefs (Table 16), no statistical differences were discernable.

The belief in the inherent nature of leadership characteristics as traits was tested against the belief in the developmental nature of leadership characteristics as skills between Colorado and Idaho. Both states were similar in the nature philosophy but differed significantly with the nurture philosophy with Colorado showing a significant preference.

Research question #4

Were there significant correlations between foundational leadership philosophies and leadership assessment preference used in identifying students gifted in leadership abilities?

There was a significant difference for preference between male and female for the usage of different assessment types where females (M=49.0% > M=25.0%) preferred using a rating scale and males (M=45.5% > M=39.4%) preferred using an observation method. Neither gender showed a preference for using a formal assessment (males M=29.5% > females M=11.5%).

Correlations were run for questions worded to express the nature philosophy (Table 16). The results showed no correlation between assessment preference and the nature philosophy. There was also no significant difference in

‘students are born with leadership abilities’ (question 7) or in ‘only academic students can develop leadership abilities’ (question 10) and assessment preference. Correlations were also run between questions worded to express the nurture philosophy (Table 16). There was a significant correlation in nurture questions 8 ‘leadership abilities need to be developed’ (1.00), question 9 ‘anyone can develop gifted leadership abilities’ (.866) and question 11 ‘…potential…has to be…developed’ (.902) and assessment preference.

Research question #5

Were there significant relationships between foundational leadership philosophies and perceptions of gifted leadership abilities?

There was no significant difference in belief in the possibility of identification of gifted leadership abilities between male (M=1.89) and female (M=1.93) participants. When administrators were surveyed for their belief in the establishment of leadership programs at the three school levels, a trend was discovered showing more strength the higher the level. The survey further tested whether administrators felt leadership programs would benefit students at different school levels. Means decreased going from elementary to high school displaying stronger preference at the high school level. Means were also compared against philosophical beliefs and school levels. Each case is similar and no significant trend between the four independent variables was evident indicating preferences for a benefit in leadership identification for elementary, middle, or high school was not dependent upon philosophical constructs.

Summary

Identifying the perceptions of administrators of gifted students resulted in mixed conclusions within philosophical constructs and no clear differences were evident between the States of Colorado and Idaho other than confidence level. This was expected because Idaho had leadership identification in their state giftedness definition for a longer period of time. The mixed results in leadership concepts perceptions reinforced the confusion found in literature. Both States placed some skills within a similar ranking range and ranked the same two questions last by statistical means although in reverse order. There were enough similarities to make recommendations.

Chapter V

Discussion

Leadership has remained in the federal definition of giftedness since the Marland Report was published in 1972. Research supports what Foster stated in 1981"Definitions of giftedness and subsequently leadership at both the federal and state levels of government present an ongoing struggle between one based on governmental policy and one that can be conceptually and empirically defined" (p. 17). Since Foster made his statement, defining gifted leadership abilities continues to be a struggle. But as society expands into a more global and cooperating society, the importance of finding and identifying these potential leaders has become crucial and has resulted in a great concern for expanding leadership education in our nation's public schools. "Many districts do not equate leadership education with traditional academic education, and teachers often do not receive proper training in leadership skill development" (Bisland, 2004, p. 1). According to Plucker and Callahan (2008) "Educators are compelled to provide an educational program for each student that supports their individual abilities and skills. Therefore, leadership training is a necessary component of programs for the gifted and talented" (p. 192).

While programs to develop the leadership potential in K-12 students are increasing, the evidence of their success has primarily been documented in isolated studies which have made it difficult to determine the overall impact of these programs. Gaining an understanding of the attitudes and perceptions of the administrators charged with implementing these programs and in identifying those students targeted for such programs is an important step in increasing program effectiveness.

The theoretical framework for this study was based on previous gifted leadership identification research and theoretical structures developed by leaders in the field (Addison, 1985; Chan, 2000; Feldhusen, 1994; Karnes, 1990; Kouzzes & Posner, 1995; Plowman, 1981; Renzulli, 1983; Sisk, 1985; Sternberg, 2005). Gifted leadership abilities develop with experience and exposure. Expert researchers (Chan, 2000; Karnes & Chauvin, 1986; Merriman, 1999), interested in the development of leadership skills among gifted students, have noted benefits of leadership training programs for advanced learners. Although they may be interpreted from various theoretical viewpoints, gifted leadership abilities are displayed in both youth and adults.

A survey of leadership perceptions was used to collect the data for the study. The population was administrators of K-12 school district gifted and talented programs in both the states of Colorado and Idaho for a total potential of 292 districts. Fifty-one percent of the administrators responded with an equal proportional representation form both states. The survey consisted of three

sections. Section one consisted of leadership attitudes. Section two consisted of leadership constructs of traits, and section three consisted of demographic information. Detailed statistical analysis addressed each of the five research questions. The results were summarized and shared with the state directors in both Colorado and Idaho.

Although there has been a plethora of leadership studies in recent years, few have been done on K-12 students, and most of those are done on upper-level high school students. One of the barriers to identifying younger students is a lack of consensus of the description of gifted leadership abilities. Before this consensus can be reached, perceptions of the educators charged with establishing identification criteria must be determined so appropriate recommendations and trainings can be implemented. Without this description, designing appropriate leadership programs in public schools for young students would be difficult and limited.

The results of this study provided some clarity on the attitudes and perceptions of gifted administrators in Colorado towards identifying gifted leadership abilities in K-12 students. Additionally, this study identified the measurement assessment type preferred by these educators. Finally, this study compared perceptions of gifted education administrators in Colorado with those in Idaho who have had the gifted leadership identification in place longer.

Major Findings

There were several findings in this study that were supported in the literature. These findings are organized by the research questions.

Research question #1

What were the attitudes and perceptions of administrators of gifted student programs in K-12 school districts in Colorado in the identification of students gifted in leadership abilities?

Colorado administrators of gifted student programs believed it was possible to identify a student as having gifted leadership abilities, and they were somewhat confident in their ability to do so. They agreed with the findings of Stodgill (as cited in Northouse, 2004) and Lester (2008) that gifted leadership abilities are developed as a student learns disagreeing with Aristotle that students are born with gifted leadership abilities, or 'traits'. They had the strongest belief in the developmental theory of leadership abilities (nurture) more than the belief students are born with gifted leadership abilities (nature). They preferred using a rating scale over observation and formal assessments although this was not statistically tied to a theoretical belief.

Colorado administrators demonstrated belief in several leadership skills found throughout the literature. They believed that students with gifted leadership abilities are influential and are good at making decisions and solving problems (Karnes & Bean, 1990; Lester, 2008; Plowmn, 1980) agreeing with the

Colorado Department of Education definition. This is consistent with the *Leadership as Influence* definition prominent in current leadership research. They also agreed that gifted leaders are responsible (Lester, 2008; McCarney & Anderson, 1998; Renzulli, 1983; Sisk, 1985), and embrace new challenges or initiatives (Karnes & Bean, 1990; Kouzes & Posner, 2006; Lester, 2008, McCarney & Anderson; Plowman, 1980; Sisk, 1985). Colorado administrators believed gifted leaders are well-liked and confident, (Lester, 2008; McCarney & Anderson, 1998; Renzulli, 1983; Sisk, 1985) ambitious (Kouzes & Posner, 2006; Lester, 2008; McCarney & Anderson, 1998; Plowman, 1980; Renzulli, 1983), good communicators (Karnes & Bean, 1990; Kouzes & Posner, 2006; McCarney & Anderson; Plowman, 1980; Sisk, 1985) and possess the ability to evaluate one's self, situations, and the interrelation of situations and people (Karnes & Bean, 1990; Kouzes & Posner; Sisk, 1985). Colorado administrators disagreed strongest that only academically gifted students can develop gifted leadership abilities. They also disagreed that gifted leaders display leadership abilities in every leadership situation which aligned them with the situational leadership theory.

Research question #2

What were the attitudes and perceptions of administrators of gifted student programs in K-12 school districts in Idaho in the identification of students gifted in leadership abilities?

Idaho administrators of gifted student programs believed it is possible to identify gifted student leadership abilities in K-12 students and were confident in their ability to identify those students. They preferred to measure gifted student leadership abilities by using an observation method over both rating scale and a formal assessment.

There was no clear theoretical framework for administrators from Idaho in determining whether they believed students are born with gifted leadership abilities or whether those abilities are developed as a student learns. The means for the survey questions indicating these philosophies showed no statistical difference. Idaho administrators believed strongly in several leadership skills supported by researchers in the field. They believed that students with gifted leadership abilities are influential (Karnes & Bean, 1990; Kouzes & Posner, 2006; Lester, 2008; McCarney & Anderson, 1998; Plowman, 1980) and have good communication skills (Karnes & Bean, 1990; Kouzes & Posner, 2006; McCarney & Anderson; Plowman, 1980; Sisk, 1985). They agreed that gifted student leaders carry responsibility well and can be counted on to do what has been promised (Kouzes & Posner, 2006; Renzulli, 1983; Sisk, 1985), embrace new challenges or initiatives (Karnes & Bean, 1990; Kouzes & Posner, 2006; Lester, 2008; McCarney & Anderson; Plowman, 1980; Sisk, 1985), are self-confident and are well liked by peers (Lester, 2008; McCarney & Anderson, 1998; Renzulli, 1983; Sisk, 1985;), and possess the ability to evaluate one's self,

situations, and the interrelations of situations and people (Karnes & Bean, 1990; Kouzes & Posner, 2006; Sisk, 1985).

Research question #3

Were there significant differences in the attitudes and perceptions in the identification of students gifted in leadership abilities in administrators of gifted student programs in Colorado and Idaho?

Administrators in Colorado and Idaho both agreed that a student can be identified gifted in leadership abilities and that it is possible to accurately identify gifted leadership abilities in K-12 students. Idaho administrators were more confident that those in Colorado in their ability to identify those abilities. Philosophically, Idaho agreed with Colorado in the *Leadership as Influence* leadership style (Addison, 1985; CEC, 2008).

When comparing beliefs between the states on skills perceptions, Colorado and Idaho both agreed with 16 of 18 gifted leadership abilities, or 89%. They only disagreed that students gifted in leadership abilities also excel in academics (Lester, 2008; Plowman, 1980) and that any student can develop gifted leadership abilities with proper instruction (Lester, 2008). In both cases Idaho agreed with this ability whereas Colorado disagreed.

Research Question #4

Were there significant correlations between foundational leadership philosophies and leadership assessment preference used in identifying students gifted in leadership abilities?

The theoretical frameworks of nature (trait theory) versus nurture (skills theory) were clustered then compared between the two states in their preference for assessment type. The results showed no clear indication of differences between preferred skills questioned and assessment type preference. There was a strong statistical correlation to the assessment preference means and the developmental philosophy.

Research question #5

Were there significant relationships between foundational leadership philosophies and perceptions of gifted leadership abilities?

There was stronger belief in the preference for the developmental philosophy (trait theory) over inherent philosophy (skills theory) for Colorado whereas Idaho participants showed no preference between the two. The means indicated stronger preference for programs in high school consistent with current practices when exploring attitudes between leadership programs in elementary, middle, and high schools. There was no indication philosophical beliefs affected this preference.

Only one skill correlated with the philosophy of gifted leadership abilities being present from birth and that was the ability to reason critically (.015<.05). Seven of the 12 skills surveyed showed a correlation with the philosophy of gifted leadership being developmental. Those seven are the ability to communicate (.000<.01) (Karnes & Bean, 1990; Kouzes & Posner, 2006; McCarney & Anderson; Plowman, 1980; Sisk, 1985), the trait that a gifted

leader tends to dominate (.003<.01) (Lester, 2008; McCarney & Anderson, 1998; Renzulli, 1983; Sisk, 1985), the ability to evaluate oneself, others, and situations (.027<.05) (Karnes & Bean, 1990; Kouzes & Posner, 2006; Sisk, 1985), the ability to excel in academics (.006<.01) (Lester, 2008; Plowman, 1980), the ability to influence others (.000<.01) (Karnes & Bean, 1990; Kouzes & Posner, 2006; Lester, 2008; McCarney & Anderson, 1998; Plowman, 1980), the ability to take initiative (.000<.01) (Karnes & Bean, 1990; Kouzes & Posner, 2006; Lester, 2008; McCarney & Anderson; Plowman, 1980; Sisk, 1985) and the ability to reason critically (.021<.05) (Karnes & Bean, 1990; Lester, 2008; Plowman, 1980).

Perceptions of gifted administrators confirmed the belief in some skills that are common to both gifted students and gifted leaders. These characteristics are that leaders and gifted students carry responsibility well and can be counted on to do what has been promised agreeing with Kouzes & Posner (2006) Renzulli (1983) and Sisk (1985). Gifted leaders excel at making decisions and/or are innovative at solving problems agreeing with Karnes and Bean (1990) Lester (2008) and Plowman (1980). Gifted administrators also agreed that gifted leaders embrace new challenges or initiatives (Karnes & Bean, 1990; Kouzes & Posner, 2006; Lester, 2008; McCarney & Anderson; Plowman, 1980; Sisk, 1985) and exhibit the ability to reason critically (Karnes & Bean, 1990; Lester, 2008; Plowman, 1980).

The survey addressed two different perceptions of leadership programs at elementary, middle, and high schools. Administrators were asked it they felt their districts had appropriate programs in place and the statistics showed they did not feel the current programs at elementary and middle school are appropriate, and are only slightly better in high school. Asked whether administrators felt students would benefit when being identified with gifted leadership abilities, statistics showed the opposing preference for identification at high school over middle school and consequently at middle school over elementary school inconsistent with the developmental philosophy.

Gender comparisons indicated no differences in attitudes towards the belief in the possibility of identifying gifted leadership abilities in students. Male participants showed a stronger preference for the use of an observation method of assessment whereas female participants clearly preferred using a rating scale.

Implications

Several things were apparent from the present study and have meaning to administrators of gifted students. First of all, there were overlaps in skills believed to be part of both gifted abilities and gifted leadership abilities. “Many parallels exist between the characteristics used to define an effective leader and the characteristics used to describe a gifted individual” (Karnes & Bean, 1996, Relationship Between Leadership and Giftedness section, ¶1). This verifies the importance of providing leadership opportunities and including leadership

training in curriculum provided for gifted students. The challenge for educators is to figure out how best to encourage and nurture leadership at an early age.

Secondly, the findings in this study helped illustrate the lack of leadership development in elementary and middle schools. Educators need to clearly understand the developmental nature of leadership. Without leadership instruction in early years, the ability of students to develop leadership abilities to their potential may limit their capacity for leadership in future years. Educational leaders need to realize the impact leadership programs have on developing gifted leadership abilities in their students. According to Plucker and Callahan (2008) "Educators are compelled to provide an educational program for each student that supports their individual abilities and skills. Therefore, leadership training is a necessary component of programs for the gifted and talented" (p. 192).

In addition, even though Colorado has a new mandate, administrators did agree with Idaho with what constitutes gifted leadership abilities. Perceptions and attitudes of the majority of Colorado administrators of gifted students agreed with current leadership theories. "As opposed to older notions of leadership as positional or as an inherent characteristic, all students who involve themselves in leadership education have the potential to increase their skills and knowledge" (Eich, 2008, p. 179). The study provided affirmation for Colorado that their level of leadership identification development is similar to Idaho that has had leadership in their definition of gifted abilities since 1993. This is an

important first step to increase confidence in Colorado administrators in this skill.

Also affirmed through the study is the philosophy of providing options for local districts in Colorado to decide the types of leadership assessments according to preference since no particular method is shown to be better than another. It is not clear why the use of formal assessments is not preferred by either state, but the study did not explore barriers of cost or perceptions of reliability of formal assessments.

Recommendations

Suggested leadership development should involve three domains to be effective: support for district coordinators, classroom teachers, and student leadership needs. The district level support should cause districts to review their programs and provide professional development to strengthen any aspects of these recommendations not already in place.

Recommendations for gifted and talented program coordinators

1) Support systems should be developed to allow the gifted and talented program coordinator in a district to provide professional development for the gifted and talented teachers under their influence. “Studies have shown that teachers of the gifted, who should be addressing the development of leadership skills within their classrooms, seldom receive training in addressing leadership skills during teacher preparation” (Karnes & Stephens, 1999, p. 62). These

professional growth opportunities at school and outside of school should include the regular classroom and gifted resource teachers who provide instruction to students in the elementary and middle school setting to take advantage of the developmental nature of leadership. Teachers should receive training through staff development on the infusion of leadership skills into the regular curriculum across all academic areas. "…leadership training enhances teacher professionalism" (Karnes & Stephens, 1999).

2) Training also needs to be supplied in effective identification of gifted leadership abilities. For Colorado, program coordinators may lack the psychometric expertise to examine and refine their identification procedures, and help may be needed. "Schools must handle the awesome business of identification of talent, ability or giftedness in professionally defensible ways. The lives of future leaders are at stake and must be handled with proper diligence and care" (Feldhusen et al., 1984, p. 151). Other states would also benefit from refining their leadership identification procedures.

3) Administrative support from Central Office should also include resources for effective curricula. Leadership curriculum is available, but if a district is constrained for budgetary reasons, the district should provide training on integrating leadership instruction in content areas. "Training should consist of how to design, implement, and evaluate instructional activities for fostering leadership within the existing elementary and secondary curriculum" (Karnes & Stephens, 1999, p. 62).

4) In addition, districts should provide resources for students to be involved in leadership programs established within the district or those available outside the district. “Although leadership is a skill that can be taught, it is also an art that must be practiced” (Karnes & Stephens, 1999, p.62). For this reason, students need to have opportunities available within the school or community to participate actively and assume leadership roles and responsibilities.

Recommendations for gifted and talented resource teachers

Gifted and talented teachers can help develop leadership in several ways.

1) Teachers can analyze their teaching styles and become more sensitive to their own attitudes and values toward leadership.

2) Teachers can encourage independent judgment and self-direction in students and provide opportunities for students to acquire and develop leadership skills. Beginning with kindergarten and early elementary programs, students can learn to develop self-understanding, conflict-resolution abilities, and problem-solving behaviors.

3) Teachers can integrate leadership concepts and training of leadership skills into their curriculum at multiple levels. Many leadership concepts can be readily infused into the existing curriculum. For example, leadership styles can be explored through reading biographies in language arts and reviewing the lives of famous leaders in social studies. “Strategies such as modeling, creative drama, group play, simulation, and collaborative work will establish a firm basis for leadership development. Analyzing biographies of great leaders will help

form concepts regarding characteristics, behaviors, and accomplishments worthy of emulation" (Karnes & Stephens, 1999, p. 62).

4) "Although schools do provide some opportunities for leadership development through student government, clubs, class officers, and athletics, these experiences are helpful to only a selected few. A more broad-based, expanded curriculum should be considered" (Karnes & Bean, 1996, p. 62). Leadership curriculum should be planned, implemented, and evaluated as specific academic courses along a K-12 developmental continuum. Students should be given opportunities to assess their potential and leadership styles. Once assessed, they should be exposed to mentorships and internships with adult leaders in the community. "The infusion of leadership skills and concepts into the school curriculum at both the elementary and secondary levels will help nurture the development of tomorrow's future leaders" (Karnes & Stephens, 1999, p.62).

Recommendations for gifted and talented students

Gifted and talented students can advocate for their own leadership development.

1) Students should get involved in developing their own leadership plans where appropriate. "Within the student's abilities the plan should be realistic, well sequenced, and comprehensive" (Karnes & Chauvin, 1985, Leadership Instructional Programs and Materials section, ¶ 1).

2) Students can get involved in student government. If they are not elected to an office, they can volunteer to work on committees working in their schools to strengthen their leadership skills.

3) Students can get involved in leadership opportunities offered through local colleges and universities. Many offer programs during the summer and on weekends. Some of them specifically target leadership skills.

4) Another possibility for leadership development is for students to become involved in community programs. Scout programs, 4-H clubs, and church organizations provide excellent opportunities for developing leadership skills.

5) Finally, if a student cannot find a leadership program nearby or one that meets their needs, they can contact local business organizations and seek volunteer and internship opportunities. The opportunities are endless for a student with the right motivation.

Limitations of the Study

There were several limitations to the study. The survey was researcher-created validated through a pilot study. The survey was a purposive sample technique that limits use for generalizing to the general population. Although 51 percent of the targeted population responded, responses from the remaining population could vary in ways not anticipated in this study. There was no control for intervening variables such as district size or differentiating between an urban or rural setting. Because the survey was sent via email, there was no guarantee

the survey was completed by the intended recipient although every effort was made to assure this. A result of convenience sampling, this threat to external validity is recognized in the data analysis and taken into account for the discussion of implications. Another limitation was the difference in size between the states of Colorado and Idaho. This weakens comparison validity.

Assumptions were made in the respondents that could also weaken validity of the study. It was assumed the administrator responding to the survey was knowledgeable and experienced in gifted education. There was no way of knowing whether a participant was in charge of the gifted program because gifted education was assigned as part of limited district office resources or because it was an area of expertise. The questions could have been answered based on the respondent's interpretation. In spite of these limitations, knowledge gained from the survey process created a clearer picture of the nature of gifted leadership identification.

Suggestions for Further Research

Since this study consisted of a sample of convenience, the author recommends that a larger-scale random sample study be held on the perceptions of gifted leadership abilities throughout the United States. This could potentially strengthen the support for leadership programs throughout K-12 schools. An interesting study would be to identify leadership traits in K-2 students and follow up with a longitudinal study on these potential leaders reporting on the leadership positions these students held throughout their educational careers.

Another study might compare young students involved in leadership development programs with matched students not given the same opportunities. Although Lester (2008) has data on the positive results of hundreds of students who have participated in his leadership program in Ohio, there is no correlative study on students identified with leadership potential not given this same opportunity. This would also prompt a study of leadership abilities in young K-2 students. A more proactive approach to leadership is supported by recognition of the need for more research on the leadership development of youth (Clark & Clark, 1994; Gardner, 1990). To ensure a cadre of leaders for the next century, leadership programs should be developed and validated for preschool, elementary, and secondary school levels. Research studies should be conducted to determine the effects of variables such as instructional strategies, personality, moral development, intellectual/academics level, family environment, and birth order.

Although this survey targeted administrators of gifted programs, the survey could be administered to educators of gifted students or classrooms to survey their perceptions. A needs survey should be conducted to gather perceptions of educators as to their needs for implementation of leadership programs. A final recommendation for further study would be validating the results of this study by another state to determine if similar results could be replicated. The researcher could share the methodology and survey to determine whether the results are generalizable to the general population of gifted

educators in the nation or if the results from this sample were unique to this sample or to Colorado and Idaho.

Reflection

As leadership abilities are used as one characteristic to identify giftedness, identified leadership skills should be an integral component of program services for gifted students. Leadership curriculum should be planned, implemented, and evaluated along a K-12 developmental continuum with multiple opportunities given for leadership development.

Educators must look to the future and must continue to develop leadership as a type of giftedness. Education's challenge for leadership development as a type of giftedness is a unique opportunity. "Teachers advocating education of the gifted need to step forward and become involved and committed in developing leadership in their gifted students and in themselves" (Sisk, 1985, p. 53).

As society grows into a more cooperative society, the importance of finding emerging leaders has become crucial. Not only should these potential leaders be identified, but also their talents need the opportunity to develop. The potential leaders of our society are right now sitting in our classes. If their abilities are not developed, the leadership abilities of these students may never be realized.

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APPENDIX A

Gifted Identification Mandates by State

State	Is there an identification Mandate?	Is Leadership included in areas of giftedness?	Is there a mandate to serve gifted students?
Alabama	Yes	No	Yes
Alaska	Yes	No	Yes
Arizona	Yes	No	Yes
Arkansas	Yes	No	Yes
California	No	Yes	No
Colorado	Yes	Yes	Yes
Connecticut	Yes	No	No
Delaware	No	Yes	No
Florida	Yes	No	Yes
Georgia	Yes	No	Yes
Hawaii	Yes	Yes	Yes
Idaho	Yes	Yes	Yes
Illinois	No	Yes	No
Indiana	No	No	No
Iowa	Yes	Yes	Yes
Kansas	Yes	No	Yes
Louisiana	Yes	No	Yes
Maine	Yes	No	Yes
Maryland	Yes	Yes	Yes
Massachusetts	No	No	No
Michigan	No	No	No
Minnesota	No (new 2008)	No	No
Mississippi	Yes	No	Yes
Missouri	No	No	No
Montana	Yes	No	Yes
Nebraska	Yes	No	Yes
Nevada	Yes	No	Yes
New Hampshire	No	Yes	No
New Jersey	Yes	No	Yes
New Mexico	Yes	No	Yes
New York	Yes	No	No
North Carolina	Yes	No	Yes
North Dakota	No	No	No
Ohio	Yes	No	No
Oklahoma	Yes	Yes	Yes

Oregon	Yes	Yes	Yes
Pennsylvania	Yes	No	Yes
Rhode Island	No	No	No
South Carolina	Yes	No	Yes
South Dakota	No	No	No
Tennessee	Yes	No	No
Texas	Yes	Yes	Yes
Utah	Yes	Yes	No
Vermont	No	Yes	No
Virginia	Yes	No	Yes
Washington	Yes	Yes	No
West Virginia	Yes	No	Yes
Wisconsin	Yes	Yes	Yes
Wyoming	Yes	No	Yes
Totals: 50	**Yes: 37/50=74%**	**16/50=32%**	**31/50=62%**

Adapted from:
(2008). Davidson Institute for Talent Development. Retrieved on April 15, 2008 from http://www.gt-cybersource.org/StatePolicy.aspx?NavID=4_0.