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## Perceptions of preservice teacher candidates towards gifted education training and obtaining the gifted education endorsement certificate in florida

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PERCEPTIONS OF PRESERVICE TEACHER CANDIDATES TOWARDS  
GIFTED EDUCATION TRAINING AND OBTAINING THE GIFTED  
EDUCATION ENDORSEMENT CERTIFICATE IN FLORIDA

by

ZACHARY LASCHOB

A thesis submitted in partial fulfillment of the requirements  
for the Honors in the Major Program in Elementary Education  
in the College of Education  
and in The Burnett Honors College  
at the University of Central Florida  
Orlando, Florida

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Thesis Chair: Gillian Eriksson

## **ABSTRACT**

According to the Institute for Research and Policy on Acceleration, training in gifted education is inaccessible by teacher candidates in colleges of education in the United States. This study involved the use of questionnaires with 100 teacher candidates enrolled on an introductory course on diversity in education in a Florida university. Teacher candidates responded to a series of items to identify beliefs about giftedness within and outside the context of education as well as the value of training in gifted education for educators. Of the 100 respondents, 79% agreed or strongly agreed with the need for specialized training for educators working with gifted students. 60.6% of respondents agreed or strongly agreed with outcomes with gifted students being positively influenced by research of and experiences with gifted students. The data showed a statistically significant, positive correlation between attitudes towards giftedness within education and agreement with outcomes with gifted students being positively influenced by research of and experiences with gifted students. Results suggest teacher candidates recognize a value in training in gifted education but do not see themselves as gifted educators and are unaware of how to be trained in gifted education.

## **ACKNOWLEDGEMENTS**

First, I am deeply grateful to my entire committee. Dr. Gillian Eriksson, who chaired this committee, throughout the process continuously expanded my knowledge while deepening my passion for giftedness. Dr. Sherron Roberts offered support, praise, and assistance alike no professor I have previously known, including offers to run documents through campus and gather signatures personally. Dr. Bryan Zugelder took me on as his first honors student and supplied precise feedback which not only refined my work but made me feel efficacious. All of this from three people who, before beginning this journey, I had never known yet entrusted time and effort to me.

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There are a host of additional people to thank including Kelly Johnston, who encouraged me to take this on; Dr. Karri Williams, who recommended the program to me; and William Corwin, my brother who helped me evaluate myself when I thought of stopping. To those not mentioned but who helped: thank you, and I apologize, but you know how forgetful Zach is.

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## **CHAPTER 1: INTRODUCTION**

### Relevance of Study

Based on 2008 United States Census Bureau data, 53.4 million students were enrolled in public elementary or secondary schools grades kindergarten through twelfth (Davis & Bauman, 2011). Using the 5-7% gifted student population estimates from the Marland Report to Congress (1972), the gifted student population in 2009 was between 2,500,000 and 3,500,000; this number is used because no agency collects gifted population data, definitions and identification criteria of gifted students differ between states, and not all states require identification of gifted students. Within a classroom of 20 students, 1 student is expected to be gifted based on this assumption.

Teacher candidates (TCs) who do become teachers will most likely teach a gifted student, or several over the course of a career, identified or not, as per the Marland Report (1972) numbers. As will be discussed later, without proper gifted education training (GET), those TCs will fail to recommend gifted students for identification, fail to recognize the needs of gifted students, and fail to provide services for gifted students. Further, the knowledge, tools, and experiences which comprise GET are not pursued by TCs.

To begin to solve this problem, the reason(s) must be isolated. Do TCs see GET as being useful in any teaching career? Do TCs see GET as being useful in their upcoming teaching career? Are TCs aware of how to pursue GET or what GET to pursue?

### Contextualizing Information Teacher Candidates Receive Without Training

Discussing the perceptions of TCs towards GET first requires understanding of vast diversity of concepts and definitions of the term "gifted". Those concepts inform practices and policies concerning the gifted and therefore, essential to this study, inform GET offered

or required by organizations, government entities, etc., such as for the Florida Gifted Education Certificate. Of the 49 definitions and theories presented in this study, no 2 are identical.

Second, despite the plethora of concepts of "gifted", common criterion exist. Though none of the 49 definitions and theories are identical with another, several criterion are included in the majority of definitions. As well, priority/importance of specific criterion (based on order included in the definition) is similar between definitions. Later in this proposal, theories related to giftedness and definitions of "gifted" will be explored.

Third, there exist gifted misconceptions. Some concern gifted learners (outcomes, needs, etc.), others revolve around gifted programs, and still others surround GET itself. As with concepts, misconceptions inform practices and policies, but negatively. Later in this proposal, misconceptions related to giftedness will also be discussed.

Taken together, those three points help contextualize the direction of this study. TCs encounter contradictory or competing information on gifted due to diversity of concepts. The focus of this study is on Floridian TCs and therefore GET required for the Florida Gifted Education Certificate; however, assuming those TCs follow the Florida definition of "gifted" despite little to no GET is an erroneous assumption. Not all information on gifted is contradictory or competing due to common criteria, however. With misconceptions abundant, and TCs having little to no GET, they are likelier to hold myths about giftedness.

Further, no definition of "gifted" is arbitrarily established from any definition or theory presented in this study. Rather, reasonable assumptions on the concept of "gifted" held by TCs is drawn from analysis of definitions. This analysis consists of robustness, common elements, and priority in the definitions and will be discussed later.

## **CHAPTER 2: THEORIES RELATED TO GIFTEDNESS**

Theories discussed were not all developed explicitly for defining giftedness; several focus on intelligence and have since become used in the gifted field. Eriksson (2001, 2006) provided a system for organizing theories of giftedness into one of three classifications: developmental (input), cognitive processes (cognitive processes), behavioral or performance outcomes (behavioral output). This classification system is used here with permission from the author.

### Theories Related to Giftedness as Input

Theories which focus on input consider the development of the gifted learner to both foster giftedness and cognitive, social, emotional, and physical development.

#### *Barbara Clark's Integrative Education Model*

The Integrative Education Model (IEM) utilizes seven keys to interact with the cognition, emotions, senses, and intuition of the learner (Clark, 1986). Within IEM, to be gifted is not cognitive alone but may include the emotional, sensory, and intuitive. Therefore, the seven keys of IEM (responsive learning environment, relaxation and tension reduction, movement and physical encoding, empowering language and behavior, choice and perceived control, complex and challenging cognitive activity, intuition and integration) try to develop cognitive, emotional, sensory, and intuitive giftedness to better equip the gifted learner for learning via those processes (Clark, 1986).

### *Howard Gardner's Theory of Multiple Intelligences*

The Theory of Multiple Intelligences (MI) suggests a variety of intelligences which are distinct in our biology, processes, and development (Gardner, 1993). Gardner began with a nonexhaustive set of six intelligences: bodily-kinesthetic, linguistic, logical-mathematical, musical, personal, and spatial (Gardner, 1993). Later, personal intelligence was divided into interpersonal and intrapersonal and naturalistic intelligence was added; Gardner has further considered the existence of an existential intelligence (Gardner, 1999). Being gifted in one intelligence would not prohibit nor necessitate being gifted in another intelligence because the intelligences are distinct in biology, processes, and development but are able to be used simultaneously on tasks (Gardner, 1993; Gardner, 1999).

### Theories Related to Giftedness as a Cognitive Process

Theories which focus on the cognitive process identify giftedness as a process, an interaction between several components on a superior level.

### *Robert Sternberg's Triarchic Theory of Intelligence*

The Triarchic Theory of Intelligence includes three components and three intelligences. The three components are cognitive processes: meta-, performance, and knowledge-acquisition components (Sternberg, 1985; Sternberg, 1997); the components may be thought of as decision, action, and learning components, respectively. The three intelligences in the Triarchic Theory are how one is identified as gifted and include analytical, synthetic, and practical intelligence (Sternberg, 1985; Sternberg, 1997). Analytical giftedness is the ability to analyze problems and understand what is being asked. Synthetic

giftedness is the ability to create new solutions and interpretations. Practical giftedness is the ability to apply analysis and synthesis to an environment (Sternberg, 1985; Sternberg, 1997).

### *François Gagné's Differentiated Model of Giftedness and Talent*

The Differentiated Model of Giftedness and Talent (DMGT) first separates giftedness from talent. While giftedness is superior ability in a domain: intellectual, creative, socioaffective, and sensorimotor, talent is superior skill developed by using giftedness in a domain (Gagne, 2000); this process of talents utilizing giftedness to develop skills under DMGT is known as "talent development" (Gagne, 2000). DMGT also includes intrapersonal catalysts and environmental catalysts which serve to influence talent development positively or negatively (Gagne, 2000).

### Theories Related to Giftedness as Behavioral Output

Theories which focus on behavioral outputs see giftedness as those outputs which are creative and have value by solving problems or interacting with others. This is not limited to products or performances but is a behavior; not all behaviors of a gifted person are gifted.

### *Joseph Renzulli's Three-Ring Conception of Giftedness*

The Three-Ring Conception of Giftedness features three major traits: "above-average though not necessarily superior general ability, task commitment, and creativity" towards a problem (Renzulli, 1978, p. 182). Giftedness is the behavioral outcome which occurs when the above-average ability, motivation, and creativity converge in "any potentially valuable

area of human performance" (Renzulli, 1978,p. 261). Using the Three-Ring Conception, persons are not gifted, but the behavior or services to elicit this behavior are (Renzulli, 1978); persons labeled "gifted" by other theories would not always exhibit gifted behaviors, and those not labeled "gifted" by other theories would sometimes exhibit gifted behaviors.

## CHAPTER 3: DEFINITIONS OF “GIFTED”

### General Definitions of "Gifted"

General definitions which are commonly used include definitions from the *No Child Left Behind* (NCLB) Act of 2001, the National Association for Gifted Children (NAGC), and the Columbus Group. While the *NCLB* definition is a federal definition, no U.S. state is required to use this definition, and none actually do. The NAGC is a national gifted advocacy organization with affiliates in the majority of U.S. states. The Columbus Group definition comes from a meeting in Columbus, Ohio, between parents, educators, and researchers; the definition is unique in attention paid to the influence asynchronous, advanced cognitive development has on the life of the gifted person.

#### *No Child Left Behind Act of 2001*

*The term “gifted and talented,” when used with respect to students, children, or youth, means students, children, or youth who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services or activities not ordinarily provided by the school in order to fully develop those capabilities.*

(No Child Left Behind Act, 2001).

#### *National Association for Gifted Children*

*Gifted individuals are those who demonstrate outstanding levels of aptitude (defined as an exceptional ability to reason and learn) or competence (documented performance or achievement in top 10% or rarer) in one or more domains. Domains include any structured*



*area of activity with its own symbol system (e.g., mathematics, music, language) and/or set of sensorimotor skills (e.g., painting, dance, sports).*

(National Association for Gifted Children, 2008a).

#### *Columbus Group*

*Giftedness is 'asynchronous development' in which advanced cognitive abilities and heightened intensity combine to create inner experiences and awareness that are qualitatively different from the norm. This asynchrony increases with higher intellectual capacity. The uniqueness of the gifted renders them particularly vulnerable and requires modifications in parenting, teaching and counseling in order for them to develop optimally.*

(Columbus Group, 2001).

#### Definitions of "Gifted" by U.S. States

To provide context for the following analysis of state definitions, three definitions are presented here. Those states are Florida, Colorado, and Indiana; Florida is chosen due to the focus of this study, Colorado for the amount of terms, and Indiana for unique terms. All state definitions are shown in appendix M.

Definitions of "giftedness" are drawn from a state entity, generally an agency or the state legislature, responsible for establishing such definitions and policies. Those definitions that are widely adopted by districts but are not established by a state entity are not included due to the lack of availability of district definitions and scope of this study. The District of Columbia, being independent of any state and having a singular district, is an exception; whenever the term "states" is used, this is inclusive of the District of Columbia. Florida is

shown first due to relevance; otherwise, states are shown in alphabetical order in the appendix M.

Though a state entity may establish a definition, this does not mean districts are required to follow this definition. Though a state entity may establish a definition, this does not mean gifted services are mandated or funded by the state. As well, though a state entity may not establish a definition, this does not mean gifted services are not mandated or are not funded by the state.

Not all states have definitions. Due to variations between states in how statutes and regulations are written, formatted, maintained, and revised as well as which entity does this, "no definition located" was used rather than "no definition". Definitions which were not located are indicated under the heading of the state. Further, when statutes or regulations exist concerning gifted students in public education but definitions are not located this is also indicated under the heading of the state. Colorado is a special case, using a definition from the Colorado Department of Education website when no definition was located in statutes or regulations, and this is indicated; similar efforts were made for all other states when no definition was located in statutes or regulations but were unsuccessful.

Identification information and additional definitions are included when considered by the researcher to be relevant to the definition. This is done when identification information or additional definitions are used to define terms used to define "gifted" or is included in the same statute or regulation as and augments the definition. For instance, with Indiana, the definition for "high ability student" includes "domain" which is defined elsewhere (Indiana General Assembly, 2012); with Florida, the criteria for eligibility augments and immediately follows the definition of "gifted" (Florida Department of Education, 2002).

*Florida*

(1) Gifted. One who has superior intellectual development and is capable of high performance.

(2) Criteria for eligibility. A student is eligible for special instruction programs for the gifted if the student meets criteria under (2)(a) or (b) of this rule.

(a) The student demonstrates: 1. Need for a special program. 2. A majority of characteristics of gifted students according to a standard scale or checklist, and 3. Superior intellectual development as measured by an intelligence quotient of two (2) standard deviations or more above the mean on an individually administered standardized test of intelligence.

(b) The student is a member of an under-represented group and meets the criteria specific in an approved school district plan for increasing the participation of under-represented groups in programs for gifted students.

1. For the purpose of this rule, under-represented groups are defined as groups: a. Who are limited English proficient, or b. Who are from low socio-economic status family.

2. The Department of Education is authorized to approve school district plans for increasing the participation of students from under-represented groups in special instructional programs for the gifted...

(3) Procedures for student evaluation. The minimum evaluations for determining eligibility are the following: (a) Need for a special instruction program, (b) Characteristics of the gifted, (c) Intellectual development, and (d) May include those evaluation procedures specified in an approved district plan to increase the participation of students from under

represented groups in programs for the gifted.

### *Colorado*

"Gifted and talented children" means those persons between the ages of five and twenty-one whose abilities, talents, and potential for accomplishment are so exceptional or developmentally advanced that they require special provisions to meet their educational programming needs. Children under five who are gifted may also be provided with early childhood special educational services. Gifted students include gifted students with disabilities (i.e. twice exceptional) and students with exceptional abilities or potential from all socio-economic and ethnic, cultural populations. Gifted students are capable of high performance, exceptional production, or exceptional learning behavior by virtue of any or a combination of these areas of giftedness:

General or specific intellectual ability.

Specific academic aptitude.

Creative or productive thinking.

Leadership abilities.

Visual arts, performing arts, musical or psychomotor abilities.

### *Indiana*

"High ability student" Sec. 3. "High ability student" means a student who: (1) performs at or shows the potential for performing at an outstanding level of accomplishment in at least one (1) domain when compared with other students of the same age, experience, or environment; and (2) is characterized by exceptional gifts, talents, motivation, or interests.

"Domain" Sec. 2. "Domain" includes the following areas of aptitude and talent:

- (1) General intellectual.
- (2) General creative.
- (3) Specific academic.
- (4) Technical and practical arts.
- (5) Visual and performing arts.
- (6) Interpersonal.

## **CHAPTER 4: CORE CONCEPTS IN STATE DEFINITIONS**

While great variation exists between definitions of "gifted", some elements are common. To isolate these common elements, the researcher first found descriptive terms, behaviors, and outcomes in each definition. Descriptive terms, behaviors, and outcomes were then compared to one another to find common terminology. Out of all 51 states, 14 core concepts were identified from the common terminology: "gifted", "intellectual", "academics", "creative", "talented", "achievement", "artistic", "interpersonal", "miscellaneous", "learning", "diversity", "motivation", and "psychomotor"; "high ability" is a special core concept generally mutually exclusive with "gifted" and "talented".

Variations of terms or phrases are grouped under a single core concept; for instance: "intellect", "intellectual", and "intellectually" and similar terms such as "intellect" and "cognitive" are grouped under "intellectual". Because precise phrasing varies, related terms or phrases are also grouped under a single core concept; for instance, definitions which discuss minority, disabled, or limited English proficient populations are grouped under "diversity". Any core concepts with related terms or phrases are discussed below; "gifted", "academics", "creative", "talented", "interpersonal", "motivation", and "psychomotor" are core concepts which are not discussed due to grouping variations only, not related terms or phrases.

"Need for services" was not included due to significant variation in how this was expressed. States which explicitly stated the need for services did so either within the definition, a preceding rationale or overview, or as part of a service mandate. Not all states which mandate services explicitly stated a need for services. Not all states which explicitly stated a need for services have mandates for services. Therefore, analysis of "need for services" would not accurately reflect the policies and beliefs of states or otherwise contribute

and was not included.

### Core Concepts

#### *Intellectual*

Refers to "intellectual", "cognitive", and "mental". Does not refer to academics, learning ability, or similar except when those were used to define "intellectual" within a definition itself.

#### *Achievement*

Refers to "achievement", "accomplishment", and "performance" when used distinct from any other domains or terms. Does not refer to performances such as artistic performances or performances for eligibility in sections concerning identification. For instance, "high achievement as well as..." a domain or term is considered different from "high achievement in..." a domain or term due to an emphasis on general achievement with the former.

#### *Artistic*

Includes both the visual and performing arts such as painting, music, drawing, dance, theater, etc.. Because some definitions fail to elaborate on the arts or artistic abilities, and because when "visual" and "performing" arts are included in a definition the terms are together, "artistic" is used to cover all visual and performing arts.

### *Miscellaneous*

Includes "interests", "technical arts", "practical arts", "career arts", "specific ability aptitude", "humanities", and "critical thinking". No term or phrase under "miscellaneous" belongs to more than one definition other than "technical arts". When analyzing the robustness of definitions, when a definition contains more than one term or phrase grouped under "miscellaneous" each is counted separately by the researcher.

### *Learning*

Refers to "learning ability," "learning behavior," and "learning potential" when used distinct from any other domain or terms. Does not refer to "learning needs" or similar nonspecific terms and phrases.

### *Diversity*

Includes any mention of minority, low income, limited English proficient, disabled, and other student populations in the definition. This includes but does not necessitate acknowledgement of underrepresentation, like ability with non-minority gifted populations, or similar.

### *High Ability*

Refers to "high ability student", "learner with high ability", or "highly capable student" when used in place of "gifted" or "gifted and talented". References to high abilities or capabilities in definitions for "gifted" or "gifted and talented" are not included.



### Analysis of State Definitions Overview

Of 51 states, 41 have a definition for "gifted"; however, four states which lack a definition for "gifted" do have statutes or regulations for gifted education. Colorado has the most robust definition with 11 core concepts; Missouri and North Dakota are the least robust with two core concepts each. Referenced across all 41 definitions are 238 core concepts. The average amount of core concepts per definition is 5.80. The median amount of core concepts per state is six. The most common amount of core concepts per definition is three and seven, both occurring in nine state definitions.

No states use the same definition, but several definitions use the same sets of core concepts. California, Idaho, Maryland, and Texas share a set of eight core concepts: academic, achievement, artistic, creative, gifted, intellectual, interpersonal, and talented; those core concepts are the eight most common core concepts. Kentucky, Oregon, Rhode Island, Vermont, and Wisconsin share a set of seven core concepts; the core concepts are again those eight most common core concepts with the exception of "achievement".

### *Analysis of State Definitions by Frequency of Core Concepts*

"Gifted" is used in 38 definitions (excludes one occurrence in a "high ability" definition). The other three definitions use "high ability"; Indiana is unique in using "high ability" and including both "gifted" and "talented" in the definition. "Talented" occurs in 21 definitions, always alongside "gifted"; Oregon is unique in using "talented and gifted" (Oregon Legislative Assembly, 2011) rather than "gifted and talented" as in other definitions. "Gifted" is the most common core concept, occurring in 92.68% of all definitions (excludes one occurrence in a "high ability" definition). "Talented" is the fifth most common core

concept, occurring in 53.65% of all definitions (excludes one occurrence in a "high ability" definition).

As shown in appendix B, "intellectual", "academic", and "creative" are the second, third, and fourth most common core concepts, occurring in 85.36%, 70.73%, and 63.41% of definitions, respectively. "Intellectual", "academic", and "creative" occur together in 21 definitions. "Intellectual" and "academic" occur together without "creative" in six definitions. "Intellectual" and "creative" occur together without "academic" in five definitions. "Academic" and "creative" never occur together without "intellectual" in one definition. "Intellectual" occurs without "academic" or "creative" in three definitions. "Academic" occurs without "intellectual" or "creative" in one definition. "Creative" never occurs in a definition without either "intellectual" or "creative".

Less common core concepts, those found in "miscellaneous" especially, come from definitions which have an above average amount of core concepts, being robust rather than ill-devised.

#### *Analysis of State Definitions by Priority of Core Concepts*

Priority of core concepts was established by first identifying order of occurrence of each core concept in each definition. Order of occurrence was given a descending point value, starting with 11 points for first, 10 points for second, and so forth until 1 point for eleventh (the highest number of terms in any definition and therefore last possible occurrence). Points for each core concept were totaled and divided by the amount of definitions the term occurred in. Resulting values ranged between 0 and 11, and the higher the resulting value the higher priority the core concept was given throughout definitions.

For example, "gifted" occurs first, "intellectual" occurs second, and "achievement" occurs third in section 1 of the Florida gifted definition: "Gifted. One who has superior intellectual development and is capable of high performance" (Florida Department of Education, 2002); "broad populations" occurs fourth later in section 2b. "Gifted" occurs first in 33 definitions, second in 5 definitions, and third in one definition; this gives "gifted" a total point value of 422 across 39 definitions. The resulting priority value for "gifted" is 10.82, suggesting "gifted" frequently has the highest priority in definitions.

Higher frequency does not always align with higher priority. "Achievement" is used 68.57% as frequently as "intellectual" as well as less frequently than "academic" or "creative" but has higher priority than each with a value of 8.66. "Talented", due to always occurring with and next to "gifted", has a high priority with 9.91 though "artistic" is used as frequently but has a priority of only 5.34. Order of occurrence and priority value are shown in appendices F and G.

Priority value is not a strong means of comparison between two core concepts with significantly different priority values. "High ability" has a value of 11.00, the highest possible, but occurs in only three definitions. "Learning" comes just below "achievement" with 8.60 but occurs in five definitions.

Indiana is unique among definitions in two ways which are relevant for analysis of priority. Though the Indiana definition is for "high ability", "gifted" and "talented" are included in the definition; for this analysis, both are included in the same manner as any other occurrence. As well, there are two "miscellaneous" core concepts; for this analysis, both are included and a score is calculated first using each occurrence as though in two definitions and second as though in one definition, indicated in appendix G.

### Synthesis of Analysis of Definitions by Core Concept

Based on the average and median amount of core concepts per definition, six core concepts would be in a common definition. Based on the frequency of core concepts within definitions, "gifted", "intellectual", "academic", "creative", "achievement", and "talented" or "artistic" (both occur in 23 definitions) would be included in a common definition. Based on priority of core concepts throughout definitions, priority of core concepts would be "gifted", "talented", "achievement", "intellectual", "academic", and "creative" in a common definition; "artistic" is not included due to lower priority and amount of core concepts in a common definition.

Therefore, a TC might be expected to recognize the terminology "gifted" and "talented" and associate those with high achievement in academics and intellectual and creative pursuits. Such a conception of giftedness seems to be fostered by several of the misconceptions held by general education teachers which are to be discussed in the following section.

## **CHAPTER 5: MISCONCEPTIONS ABOUT GIFTED**

Several lists of myths and misconceptions about the gifted exist. Notable is *Common Myths in Gifted Education* (NAGC 2008b) which includes myths such as "gifted education programs are elitist", "all children are gifted", and possessing a disability or receiving poor grades as reasons students are not considered gifted. All misconceptions will negatively inform practices and policies of those in education. The following eight (8) misconceptions are especially relevant to teachers, and therefore TCs seeking to become teachers, in general education classrooms by negatively informing teaching methods for gifted students.

### Misconception #1: The Gifted Are a Homogeneous Group

Reis and Renzulli (2009) "begin this response [to this myth] with the following resounding statement: There is no single homogeneous group of gifted children and adults" (p. 233). The misconception of gifted as a homogeneous group exists in several forms including the same aptitudes and behaviors. While checklists of common characteristics have been developed to help identify gifted students, the characteristics "are not absolute in the sense that every gifted individual always exhibits or manifests every one of them" (Frasier & Passow, 1994, p. xvi). The misconception of homogeneity amongst gifted students attempts to service different needs of gifted students via uniform and/or singular program offerings.

### Misconception #2: Giftedness is Fixed at Birth

Reis and Renzulli (2009) again "begin this response [to this myth] with the following resounding statement: ... giftedness is developmental, not fixed at birth" (p. 233) Several factors negatively influence development and outcomes including "poverty, hunger, poor

schooling, or lack of stimulation" (Reis & Renzulli, 2009, p.235), and therefore several factors positively influence development and outcomes including stimulation, good schooling, support, and so forth. The misconception of giftedness being a fixed state removes responsibility from educators for developmental maintenance of giftedness; further, this misconception gives rise to underrepresentation of numerous populations who lack a developmentally supportive environment.

#### Misconception #3: Single Scores, Particularly IQ, Identify Giftedness

Borland (2009) notes "very few within our field define giftedness as high IQ" (p. 237); despite this, gifted research, constrained by quantitative analysis, "crowns IQ as the defining characteristic of giftedness" (Worrell, 2009, p. 243). What is known is "[h]igh potential for intellectual performance is multidimensional" (Friedman-Nimz, 2009, p. 248), and singular scores cannot identify this multidimensional potential. The misconception of singular scores identifying giftedness assumes gifted students are homogeneous and/or possess general rather than specific aptitudes.

#### Misconception #4: Giftedness is Global, in All Areas

Corollary of the singular score and homogeneous misconceptions is an 'underlying assumption ... that gifted children have a general intellectual power that allows them to be gifted "across the board"' (Winner, 1997, p. 14). Giftedness in general is not defined by a single score, but the giftedness of an individual may be, or several. This misconception of global giftedness ignores the twice-exceptional population, those who are both gifted and possess a disability, and expects gifted achievement in all areas.

#### Misconception #5: Differentiation in General Education Classrooms is Sufficient

"[T]he reality is that the way we “do school” does not make it easy for classrooms to be places where individual student needs, ... ultimately shape the curriculum" (Hertberg-Davis, 2009, p. 252). Though differentiation should be encouraged, the demands of the classroom, including high-stakes testing and the broad aptitudes across students in a classroom with common standards, make this difficult to implement. When implemented, according to Sisk (2009), differentiation "focuses on the academic needs of gifted students and overlooks the emotional needs of the gifted" (p. 270). Differentiation being difficult and with such focus would be a "patch-on program" as per Tomlinson (2009, p. 254), lacking several components of true programs, such as professional development and ongoing assessment for program processes and outcomes, as well inappropriate matches between who is, what is, and how it is taught.

This misconception of differentiation being sufficient uses time and effort of unprepared teachers without providing a true program to service the needs of the gifted learner.

#### Misconception #6: Singular Gifted Programs are Sufficient

Unlike other misconceptions presented here, this misconception exists not necessarily from ignorance on gifted students but the usefulness of being targeted. To advocate effectively for gifted, provide professional development for educators of gifted, and compare data all benefit from being targeted (Kaplan, 2009). This is, of course, to the detriment of the gifted students. In some ways, this misconception also sees the gifted as a population homogeneous enough to be serviced by a singular program. Important is to recognize, while

there is no singular gifted program able to service the needs of all gifted students, there are elements which appropriate differentiation consists of (Kaplan, 2009). This misconception of singular programs being sufficient minimizes true differentiation and disconnects the general education teacher from responsibility to serve the needs of the gifted student.

#### Misconception #7: Gifted Students Will Succeed Regardless

This misconception serves as justification for reducing, eliminating, or failing to implement gifted programs, especially as educational resources are scarce. This misconception is short-sighted, ignoring issues such as boredom and frustration in developing into poor study habits and lack of motivation (Moon, 2009) or stress caused by high expectations of the self or excess involvement in curricular and extracurricular activities (Peterson, 2009). Gifted students have "an array of comparative strengths, vulnerabilities, and similarities" with non-gifted students (Peterson, 2009, p. 280), making them as susceptible as any other population to emotional, social, or academic issues. This misconception of assumed success ignores the social and emotional needs of gifted students and fails to develop on potential aptitudes.

#### Misconception #8: Needs of Gifted Students Are Cognitive

Both under- and high achieving gifted students face social and emotional stress states Peterson (2009), but "achievement may be central to achievers' identity" causing them to avoid revealing social or emotional problems in the same way as avoiding asking for academic help. Sensitivities and intensities common in gifted students create additional issues, fearing others could not handle the problem (Peterson, 2009). In addition, when



seeking help, counselors can be ineffective servicing the gifted population caused by biases (Peterson, 2009) due to lack of training and previous misconceptions. This misconception of domain needs fails to provide gifted students the tools to cope with additional pressures, expectations of independence, and asynchronous development.

## **CHAPTER 6: LITERATURE REVIEW**

Throughout Colleges of Education in the United States, one will find few courses offered on the education of gifted and talented students; fewer still are available to TCs, and those courses which exist tend to be offered as electives rather than part of any requirements (Colangelo, Assouline, & Gross, 2004). As a result, do our teachers, novice to veteran, possess the knowledge necessary to interact with gifted students within the school? Agreement exists among untrained inservice and TCs about gifted students having distinct needs (Lassig 2009). However, misconceptions of and opposition toward gifted education by the untrained otherwise persist (Bain, Bliss, Choate, & Brown 2007; Hoogeveen, van Hell, & Verhoeven 2005; Lassig, 2009; Steenberger-Hu & Moon 2011; Tomlinson, Tomchin, Callahan, Adams, Pizzat-Tinnin, Cunningham, Moore, Lutz, Roberson, Eiss, Landrum, Hunsaker, Scott, & Imbeau. 1994).

### Effects of Gifted Education Training on Perceptions Towards Gifted Programs

Inservice and TCs without GET hold to common misconceptions about the social-emotional dangers of grade and subject acceleration (Bain, Bliss, Choate, & Brown, 2007; Hoogeveen, van Hell, & Verhoeven, 2005; Lassig 2009; Southern, Jones, & Fiscus, 1989; Tomlinson, et al., 1994) as well as the benefits of using gifted students as peer tutors and teachers (Siegle, Moore, Mann, & Wilson, 2010). These attitudes are held spite of academic acceleration having been shown to not only provide significant academic benefits but social-emotional ones as well (Brody & Benbow, 1987; Saylor & Brookshire, 1993; Steenberger-Hu & Moon, 2011). Further, the frequent use of gifted students for peer tutoring is not only lowering the priority of the education of gifted students (Smidchens & Sellin, 1976) but is

less effective rather than using peers of like ability (Schunk, 1987).

#### Effects of Gifted Education Training on Gifted Programs and Policies

Orenstein (1984) found more effective gifted programs more often were managed by the gifted coordinator for the district or gifted teacher for the school as opposed to district administration which managed less effective programs. Gifted coordinators and gifted teachers tend to have greater amounts of GET. Commonalities between effective gifted programs included parental involvement, services for kindergarteners, and greater variety of offerings for students; this last, in particular, "may be attributed to having a higher percentage of staff with prior experience in gifted education and more frequent in-service training" (Orenstein, 1984, p. 104). Therefore, Orenstein (1984) found that effective gifted programs are those with greater frequency of GET professional development and are managed by those with more GET.

#### Effects of Gifted Education Training on Identification of Gifted Students

GET has been shown and recommended to increase identification of gifted characteristics (Gear, 1978; Copenhaver & McIntyre, 1992; Siegle, Moore, Mann, & Wilson, 2010). Gear (1978) found not only did GET increase identification of gifted students, but this came with greater accuracy per recommendation; teachers recommended gifted students more often and recommended nongifted students less often. Positive and negative behaviors indicative of giftedness are identified by teachers with greater accuracy (Copenhaver & McIntyre, 1992) as being related to giftedness with training.

Because singular characteristics, such as specific academic deficits or lack of

motivation, may cause teachers to errantly forego recommendation (Siegle, Moore, Mann, & Wilson, 2010), training in gifted characteristics for both inservice and TCs is essential to assure gifted students receive appropriate services. As said by Siegle et al. (2010), GET for teachers results in the increased recognition and appreciation of the expression of giftedness.

### Perceptions of Teachers Towards the Benefits of Gifted Education Training

Those identified as outstanding gifted teachers tend to believe working field knowledge, gained from training in gifted education, is important to gifted teacher success (Whitlock & DuCette, 1989). Further, exposure for preservice teachers to gifted training makes preservice teachers aware of the need and means to differentiate instruction (Megay-Nespoli, 2001). However, Draper and Post (n.d.) found minimal gifted training, ten hours over the course of one day, was unable to alter practices and beliefs, and educators expressed ambivalence concerning the usefulness of such gifted training. Therefore, gifted education, while able to be effective, needs substantial time investment.

### Attitudes of Teachers Towards Gifted

Research focusing on the attitudes that inservice teachers and TCs hold towards gifted students is rich, but varied. Mixtures of positive (Smidchens & Sellin, 1976; McCoach & Siegle, 2005; Megay-Nespoli, 2001) and negative or less favorable (Peachman, 1942; Crammond & Martin, 1987; Jacobs, 1972; McCoach & Siegle, 2005) attitudes are found, but delving deeper finds attitudes change to the context.

### *Influence of Attitudes of Teachers on Student Outcomes*

Attitudes of teachers towards any student has an influence, positive or negative, on student outcomes (Hornstra, Denessen, Bakker, van den Bergh & Voeten, 2010; Cantrell, Stenner & Katzenmeyer, 1977; Jussim & Harber, 2005; Madon, Jussim & Eccles, 1997; Mayberry, 1971). The causes and strength of this influence varies, but positive attitudes tend to increase positive outcomes and decrease negative outcomes while negative attitudes tend to decrease positive outcomes and increase negative outcomes. Variation of cause and strength are best described by the conflict of attitudes creating self-fulfilling prophecies versus accuracy of expectations creating attitudes (Jussim & Harber, 2005; Madon, Jussim & Eccles, 1997).

Hornstra et al. (2010) found implicit attitudes, those not self-reported, had greater influence than explicit attitudes, those self-reported. As well, student perception of attitudes moderates the influence of teacher attitudes (Jussim & Harber, 2005) and necessitate student observation of preferential behaviors by teachers. Knowledgeable use of positive behaviors was found by Cantrell et al. (1977) to result in positive outcomes compared to unknowledgeable behaviors. As well, negative attitudes towards the material despite positive attitudes towards the student has been shown to have the worst attitudes-based outcome, with positive attitudes towards the material and students the best (Mayberry, 1971).

### *Positive Attitudes of Teachers Towards Gifted Students*

Smidchens and Sellin (1976) saw positive attitudes when teachers spoke of instructing gifted students due to the ease of acquiring new information; part of this may also result from restricted identification of gifted students (Siegle, Moore, Mann, & Wilson, 2010) to those

exhibiting positive classroom behaviors such as cooperativeness and motivation. This positive attitude, Smidchens and Sellin (1976) note, may cause gifted students to have lower priority for services compared to struggling students. Training has not been found to be a predictor of positive attitudes towards gifted students (McCoach & Siegle, 2005) whereas increased contact with giftedness is a predictor of positive attitudes towards gifted students (Begin & Gagné, 1994; Jacobs, 1972); however, training will increase already positive attitudes (Megay-Nespoli, 2001). Considered alongside Whitlock and DuCette (1989) and Orenstein (1984), this suggests those with positive attitudes towards gifted students seek out gifted training and experiences with giftedness while those without positive attitudes do not.

#### *Negative Attitudes of Teachers Towards Gifted Students*

Nongifted inservice teachers and TCs who hold negative attitudes towards gifted students have attitudes similar to those of adolescents in rating value of athleticism, industriousness, and brilliance, respectively (Crammond & Martin, 1987). As well, Jacobs (1972) showed negative or limiting attitudes of teachers are similar to those of high school dropouts. One reason for those negative attitudes from educators was discussed by Peachman (1942) concerning heightened 'native equipment': cognitive advantages which appear to simplify academics. This 'native equipment' may lead to the belief gifted students do not need priority in additional services. Peachman notes, however, school was tending away from strict academic focus, and this tending away continues.

Another reason posed is the lack of tools for differentiation within general education classrooms (Bain, Bliss, Choate, & Brown 2007; Tomlinson, et al,1994). Lack of tools leads to frustration for both the teacher, particularly for novice teachers contending with

undertaking a new profession, and the student, and frustration from the student manifests as defiance or boredom.

### *Attitudes of Teachers Towards Gifted Programs*

While attitudes towards gifted students may differ, attitudes still tend to be positive without GET, but beliefs about gifted services show misconceptions (Bain, Bliss, Choate, & Brown, 2007; Hoogeveen, van Hell, & Verhoeven, 2005; Lassig, 2009; Steenberger-Hu & Moon, 2011; Tomlinson, et al., 1994). Grade and subject acceleration frequently has negative attitudes while heterogeneous grouping commonly has positive attitudes; "heterogeneous grouping" both refers to keeping gifted students within the general education classroom and grouping with students of different aptitudes. Peachman (1942) found resistance to services or at least a greatly lowered priority for services (Smidchens & Sellin, 1976) despite general agreement among both inservice and preservice teachers for the need for services (Lassig, 2009).

A theme across several research studies is the need for training using evidence, namely research, and providing practices, methods of differentiation, and service delivery methods. Tomlinson et al. (1994) note any information in courses presented concerning gifted education is disconnected from actual practices for TCs.

## CHAPTER 7: RESEARCH DESIGN

### Core Questions

#### *Core Question #1: Attitude Towards Gifted in General and GET*

Is there a relationship between TCs' attitude towards giftedness outside the context of education and attitude towards the need for GET for all educators working with gifted students?

#### *Core Question #2: Attitude Towards Gifted Services and GET*

Is there a relationship between TCs' attitude towards gifted services and attitude towards the need for GET for all educators working with gifted students?

#### *Core Question #3: Attitude Towards Gifted Education Training*

Is there a relationship between TCs' attitude towards the need for GET for all educators working with gifted students and in knowing how to earn the Florida Gifted Education Certificate?

### Instrumentation

The instrumentation for this thesis is a 27 Likert-item questionnaire modified and used with permissions from a 25 item questionnaire found on pages 195-196 in *Growing Up Gifted* by Dr. Barbara Clark. Items are divided into three groups. Items #1, #2, #3, #4, #7, #8, #11, #12, #16, #17, #22, #23, #24, #25, and #26 concern giftedness outside the context of education (general). Items #5, #6, #10, #13, #14, #15, #19, #20, and #21 concern giftedness within the context of education, including services (services). Items #9, #18, and #27 concern



training in gifted education (training); these items are the focus of this study. Responses are a whole numeral, one through five, which represent "I strongly agree", "I agree", "I have no opinion", "I disagree", and "I strongly disagree", respectively. Respondents are not required to respond to all items.

Other than items #9 and #27, responses with stronger agreement "match those of people who have devoted who have devoted their energy to understanding gifted children (Clark, 2008, p. 196).

### Sampling

The sample is drawn from several sections of an introductory course on diversity in education with a 100 sample size across two sections taught by different instructors. As this is a core required course early in all education majors in the state of Florida, respondents are TCs with little to no experience with gifted education and little to no GET; as well, TCs comprise prospective teachers across a range of K-12 grade levels and many subject areas.

### Hypothesis

#### *Null Hypothesis*

There will be no significant difference between TCs' attitudes towards GET and TCs' attitudes towards giftedness outside the context of education, attitude towards gifted services, or knowledge in obtaining the Florida Gifted Education Certificate.

#### *Alternative Hypothesis*

There will be a significant difference between TCs' positive attitudes towards GET

and TCs' positive attitudes towards gifted students and gifted programs.

## CHAPTER 8: DATA

After receiving permission to solicit responses in the two introductory diversity courses, 100 questionnaires were received from respondents in two course sections with 2,687, or 99.518%, of items completed. Responses were divided into one of three groups: general (g), services (s), and training (t). Responses were averaged per questionnaire to create a g value, s value, and t value. Responses from focal items #9, #18, and #27 were also kept as individual #9, #18, and #27 values.

Levels of response between group values and item values were compared via two-tailed, Pearson correlated, bivariate analysis. Pairings were t values and g values, t values and s values, #9 values and g values, #9 values and s values, #18 values and g values, #18 values and s values, #27 values and g values, #27 values and s values, as well as #9 values and #27 values.

Levels of response in total for each group and each item were generated via mean and modal values.

### Results

As shown in Table 7, t value and g value did not show statistical significance at the 0.208 level with a Pearson r of 0.127. T value and s value did not show statistical significance at the 0.069 level with a Pearson r of 0.182. No statistical significance was shown between #9 value and g value at the 0.075 level with a Pearson r of 0.179. No statistical significance was shown between #9 value and s at the 0.079 level with a Pearson r of 0.176. No statistical significance was shown between #18 value and g value at the 0.186 level with a Pearson r of 0.134. Positive correlation between responses to item 18 and s score was statistically

significant at the 0.002 level with a Pearson  $r$  of 0.309. No statistical significance was shown between #27 value and  $g$  value at the 0.390 level with a Pearson  $r$  of -0.087. No statistical significance was shown between #27 value and  $s$  value at the 0.116 level with a Pearson  $r$  of -0.158. No statistical significance was shown between #9 value and #27 value at the 0.303 level with a Pearson  $r$  of -0.104.

As shown in Table 8, mean #9 value was 1.960, narrowly more positive than the statement "I agree" specialized training is necessary for educators working with gifted children to properly service their needs. Mean #18 value was 2.190, more negative than the statement "I agree" educators working with, studying, and trying to understand gifted children have more positive outcomes than those which do not work with, study, or try to understand gifted children. Mean #27 value was 4.000, aligned with "I disagree" I know how to earn the Florida Gifted Education Certificate. Mean  $t$  value was 2.719, more positive than "I have no opinion" about the need, value of, or way to receive GET. Mean  $g$  value was 2.360, more negative than "I agree" with research-based attitudes towards giftedness outside the context of education. Mean  $s$  value was 2.131, more negative than "I agree" with research-based attitudes towards giftedness within the context of education.

As shown in Table 8, modal #9 value was 2, aligned with the statement "I agree" specialized training is necessary for educators working with gifted children to properly service their needs. Modal #18 value was 1, aligned with the statement "I strongly agree" educators working with, studying, and trying to understand gifted children have more positive outcomes than those which do not work with, study, or try to understand gifted children. Modal #27 value was 5, aligned with the statement "I strongly disagree" I know how to earn the Florida Gifted Education Certificate. Modal value for  $t$  value was 2, aligned with "I

agree" about the need, value of, or way to receive GET. Modal value for g value was 2, aligned with "I agree" with research-based attitudes towards giftedness outside the context of education. Modal value for s value was 2, aligned with "I agree" with research-based attitudes towards giftedness within the context of education.

### Analysis

#### *Correlations*

No significant difference was identified between TCs attitude towards GET and TCs attitude towards giftedness outside the context of education, attitude towards gifted services, or knowledge in obtaining the Florida Gifted Education Certificate. However, there was a significant, positive correlation between attitude on positive outcomes due to experience or knowledge of giftedness and attitude towards gifted services. Nonsignificant, positive correlations are identified in all pairings other than those involving #27 value.

#### *Tendencies*

Responses have a strong tendency to be positive, "I strongly agree" and "I agree", with 58.9% of responses being either 1 or 2. Neutral responses, "I have no opinion", account for 23.6% of responses. Negative responses, "I strongly disagree" and "I disagree", are far less common with 17.4% of responses being either 5 or 4; removing item #27 from the calculations reduces negative response rate to 14.8%. Strong responses, "I strongly agree" and "I strongly disagree", are only 27.0% of responses. Weak responses which are not neutral, "I agree" and "I disagree", are nearly half of responses at 49.3%; weak responses including neutral responses, "I agree", "I have no opinion", and "I disagree", are 73.9% of responses.

Other than values where item #27 is present, average values reflect similar positive but central responses. Only #9 value is more positive than "I agree", but #18 value, g value, and s value are all closer to "I agree" than "I have no opinion", often by a large margin. Absent item #27, mean t value is similar to other values at 2.075, narrowly more negative than "I agree" about the need or value of GET.

## CHAPTER 9: DISCUSSION

The positive, significant correlation with  $s$  value is not unexpected because, as shown when generating a common "gifted" definition, gifted is routinely associated with education, which  $s$  value focuses on. Item #18, which  $s$  value correlates with, is stated flatly to avoid possible misinterpretation from words such as "generally", "may", "can", etc.. TCs early in an academic career recognize the need for research, experience, and interest for increasing success with gifted students, and the stronger this recognition the stronger the responses align with research-based attitudes about gifted within the context of education.

Interpretation of item #9 may keep this from having correlation with other values. Item #9 states: *Specialized training in gifted education is necessary for all teachers who work with gifted children to properly service their needs.* What is a teacher who works with gifted children? For some, this implies the educator working strictly with gifted-identified children. For others, this implies the educator working with heterogeneous populations including the gifted-identified, such as in general education classrooms. TCs early in an academic career generally agree with the need for training, but responses are inconsistent as a result of interpretation.

An important note, however, is the mean #9 value being more positive than "I agree" with two interpretations says something valuable about TCs' attitudes. In one interpretation, TCs recognize being a gifted educator no matter the position and therefore the need for GET no matter the position. In the other interpretation, TCs do not recognize being a gifted educator no matter the position but still recognizes the need for GET for gifted educators. There is recognition of need for GET to provide appropriate services as well recognition of need for services for gifted students (Lassig, 2009), but there is not accurate identification of

gifted students within the classroom without GET (Copenhaver & McIntyre, 1992)

contributing to a belief of not being a gifted educator.

Either interpretation says TCs recognize a value in GET. However, TCs do not necessarily recognize this value is of interest to themselves.

Contrasting this with strong disagreement on knowing how to obtain the Florida Gifted Education Certification and lack of offering GET as part of teacher education (Colangelo, Assouline, & Gross, 2004), TCs lack access to GET but recognize a need or fail to recognize a need due to lack of access to GET.

One particular item of note is item #10 which, alongside item #14 has "I disagree" as the most common response, has the only mean value (other than item #27) over 3 at 3.52. This will be a reflection of experiences with other gifted students. Considering inaccurate identification of gifted students and focus on association of gifted with education, disagreement with this item should be expected. Gifted students would therefore only be identified from academically gifted students with motivations to learn and positive student-teacher relationships: those who do not disrupt or otherwise challenge the authority of teachers.

About receiving 99.518% of responses, no pattern is found between blank responses. Two different respondents have five blank responses each. Seven blank responses are in s value items, five blank responses are in g value items, and one blank response is in a t value item. Items #6, #12, and #15 have two blank responses. No pattern is able to be established from this due to the low number of blank responses. The only conclusion is the language in some items is prohibitive to some TCs this early in academic careers.



### Limitations

Wording on several questions includes vague terms such as "can" (item #1, #2, #12, #15, #16, #22, #23), "often" (item #1, #10, #15, #16, #17, #24), "seldom" (item #3), and "some" (item #11, #20). Therefore, responses, especially weak responses, are open to interpretation of the terms and are not necessarily reflective of respondent beliefs. Specific, steadfast wording should be used to make responses reflective of beliefs in isolation rather than beliefs and terminology interpretation.

Openness to interpretation is especially relevant with item #9. As previously discussed, the varied interpretations still reveal useful information, but lack of correlation between #9 value and other values is not necessarily accurate. Item #9 must be reworded, possibly broken into several items, to make the identified group needing GET explicit.

While inputting data, erasure marks and mark-throughs with pen were discovered on papers. The majority were slight changes of one numeral, but others were complete changes across the extremes of the scale. Items to assure proper usage of the instrument should have been included. In addition, reminders of what the scale represents should have been included throughout the instrument. This would assure responses accurately reflect the beliefs of the respondents.

Because the entire questionnaire focuses on giftedness, responses which are positive towards giftedness, all responses, may suffer under the "halo effect". In addition, because responses which are socially desirable are in the same set of numbers, 1 and 2, further responses could skew towards those socially desirable responses once a pattern is identified by the respondent. Hiding the focus on giftedness would require an extensive instrument which uses items on general and special populations and randomized placement of items. To

remove any pattern, items should be randomly chosen and reworded so the opposite end of the scale, disagreement and strong disagreement, more socially desirable.

As the data is ordinal, analysis of response strength comes with a caveat as distance between response strength varies between responses and respondents. “I strongly agree” for one respondent is not the same strength of agreement as for another respondent, and this follows for all other responses. Further, “I agree” is not the same distance in terms of strength from “I have no opinion” as “I strongly agree” is from “I agree”, and this follows for all other adjacent responses.

Respondents are TCs early in their academic careers who, while an informal survey after questionnaires were completed and returned suggested all intended to be a teacher, have not had coursework on exceptionalities or with other specific populations. Further, few are expected to have had experience in the classroom attempting to differentiate instruction or working for prolonged periods with gifted students. The views of respondents will shift over the course of years and does not necessarily reflect the views of TCs or novice teachers.

Responses are not action. This study says nothing about the differentiation respondents will do for gifted students. This study says nothing about identification of gifted students by respondents. This study says nothing about the seeking of GET by respondents. What this study says is there is a correlation between strength of recognition of the need for research and experience for success with gifted students and strength of beliefs regarding gifted services, though this may have implications for differentiation, identification, and seeking of GET.

## Conclusion

More positive attitudes on the efficacy of GET will lead to more recognition of the need for GET. As there are positive attitudes about the efficacy of GET, availability and requirement of GET are larger stumbling points on having a population of teachers trained to identify and differentiate for gifted students. Unfortunately, availability itself may not be enough unless teachers and TCs self-identify as being gifted educators due to disconnects between the general education classroom and gifted services. This self-identifying occurs, however, via receiving quality, prolonged GET.

This requires GET becoming standard in education curriculum. What should be emphasized is the conception of the gifted student being different from experiences with gifted-identified students. Low recognition of gifted students who are underachievers or oppositional leads to low identification of gifted students which are underachievers or oppositional. What other types of gifted students are ignored, such as athletes, artists, and musicians? We will not know until the conception of giftedness begins to expand. We will not know until the expanded conception of giftedness begins to be taught. We will not know until giftedness begins to be taught to all educators who work with gifted students.

What is reassuring, though, is the positive responses towards gifted students and gifted services from TCs despite disagreement with the research. For instance, there was disagreement with item #10, referring to teachers seeing gifted students as disrespectful and disruptive; average value was 3.52 and modal value was 4, suggesting TCs might see gifted students as less disrespectful or disruptive than the general student population. This will influence behaviors identified and misidentified for gifted recommendations, but provides a starting point because, as previously mentioned, GET will enhance positive attitudes towards

gifted students and services (Megay-Nespoli, 2001), but not necessarily change negative attitudes into positive attitudes.

Finding overwhelming support among TCs for gifted students and services as well as recognition of value of GET for gifted educators while not self-identifying as gifted educators means GET as standard in the education curriculum is both worthwhile and necessary; TCs will respond and receive. Like gifted students needing services for success, educators need GET for success with gifted students.

### Future Research

Future, broader samples including degree-seeking students not in education programs compared to those in education programs would reveal potential attitudes, positive or negative, towards giftedness in TCs. Both groups would be academically successful, but those TCs have had school experiences which convince them to become teachers; the possibility is TCs have attitudes which align more closely with the attitudes of current teachers. Gifted versus non-gifted respondents, or gifted-identified versus gifted-but-not-identified, would offer additional information of how experiences alter attitudes towards giftedness and the need for GET.

Another avenue would be to focus again on TCs and use an instrument with Yes/No responses on the need for GET. Several items would make explicit what was meant by “teachers who work with gifted students” including gifted program educators, gifted program educators and general education teachers, or all teachers including resource. Expansion of the sample to current teachers is another consideration. These would isolate whether GET was considered relevant on an individual level alongside being recognized as worthwhile for at

least some population of educators.

Studies utilizing entrance and exit questionnaires for education majors show how attitudes have altered over the course of education curriculum. Does education curriculum squelch idealism of being able to service all populations appropriately or does this raise awareness of the need for additional training to service all populations appropriately? Longitudinal studies including TCs who become teachers would provide valuable data to identify how education curriculum alters attitudes as well as experience teaching.

Non-instructional positions within schools integral to the identification process would be of similar importance to identify. School psychologists and other guidance positions frequently carry out testing for identification and meetings to discuss placement; negative attitudes and minimal knowledge of gifted by these positions limit proper assessment and servicing. Further, because of the lack of extensive day to day experiences with those students being recommended, recognizing certain disruptive or disrespectful behaviors as gifted indicators as opposed to social or emotional issues becomes dependent on GET.

**APPENDIX A: TABLE 1: STATE DEFINITIONS OF “GIFTED” BASED  
ON STUDENT LABEL CONCEPTS**

**APPENDIX A: TABLE 1: STATE DEFINITIONS OF “GIFTED” BASED  
ON STUDENT LABEL CONCEPTS**

<b>State</b>	<b>Gifted Only</b>	<b>Gifted &amp; Talented</b>	<b>High-Ability</b>	<b>No Definition</b>
Alabama	X			
Alaska				X
Arizona	X			
Arkansas		X		
California		X		
Colorado		X		
Connecticut		X		
Delaware		X		
District of Columbia				X
Florida	X			
Georgia	X			
Hawaii		X		
Idaho		X		
Illinois				X
Indiana			X	
Iowa		X		
Kansas	X			
Kentucky		X		
Louisiana	X			
Maine				X
Maryland		X		
Massachusetts				X
Michigan		X		
Minnesota				X
Mississippi	X			
Missouri	X			
Montana		X		
Nebraska			X	
Nevada		X		
New Hampshire				X
New Jersey		X		
New Mexico	X			
New York	X			

<b>State</b>	<b>Gifted Only</b>	<b>Gifted &amp; Talented</b>	<b>High-Ability</b>	<b>No Definition</b>
North Carolina	X			
North Dakota	X			
Ohio	X			
Oklahoma		X		
Oregon		X		
Pennsylvania	X			
Rhode Island		X		
South Carolina		X		
South Dakota				X
Tennessee	X			
Texas		X		
Utah				X
Vermont		X		
Virginia	X			
Washington			X	
West Virginia				X
Wisconsin		X		
Wyoming		X		
<b>Total</b>	<b>16</b>	<b>22</b>	<b>3</b>	<b>10</b>
<b>Total as %</b>	<b>39.02%</b>	<b>53.65%</b>	<b>7.31%</b>	<b>24.39%</b>



**APPENDIX B: TABLE 2: STATE DEFINITIONS OF “GIFTED” BASED  
ON COGNITIVE CONCEPTIONS**

**APPENDIX B: TABLE 2: STATE DEFINITIONS OF “GIFTED” BASED  
ON COGNITIVE CONCEPTIONS**

<b>State</b>	<b>Intellectual</b>	<b>Academic</b>	<b>Creative</b>	<b>No Concept</b>
Alabama	X	X	X	
Alaska				X
Arizona	X			
Arkansas	X		X	
California	X	X	X	
Colorado	X	X	X	
Connecticut	X	X	X	
Delaware	X	X	X	
District of Columbia				X
Florida	X			
Georgia	X	X	X	
Hawaii	X	X	X	
Idaho	X	X	X	
Illinois				X
Indiana	X	X	X	
Iowa	X		X	
Kansas	X	X		
Kentucky	X	X	X	
Louisiana	X	X		
Maine				X
Maryland	X	X	X	
Massachusetts				X
Michigan	X	X		
Minnesota				X
Mississippi	X	X	X	
Missouri				X
Montana				X
Nebraska	X	X	X	
Nevada		X		
New Hampshire				X
New Jersey				X
New Mexico	X		X	
New York	X	X		

<b>State</b>	<b>Intellectual</b>	<b>Academic</b>	<b>Creative</b>	<b>No Concept</b>
North Carolina	X	X		
North Dakota				
Ohio	X	X	X	
Oklahoma	X	X	X	
Oregon	X	X	X	
Pennsylvania	X		X	
Rhode Island	X	X	X	
South Carolina	X	X		
South Dakota				X
Tennessee	X			
Texas	X	X	X	
Utah				X
Vermont	X	X	X	
Virginia	X	X	X	
Washington	X	X	X	
West Virginia				X
Wisconsin	X	X	X	
Wyoming				X
<b>Total</b>	<b>35</b>	<b>29</b>	<b>26</b>	<b>14</b>
<b>Total as %</b>	<b>85.36%</b>	<b>70.73%</b>	<b>63.41%</b>	<b>27.45%</b>

**APPENDIX C: TABLE 3: STATE DEFINITIONS OF “GIFTED” BASED  
ON ADDITIONAL CONCEPTS**

**APPENDIX C: TABLE 3: STATE DEFINITIONS OF “GIFTED” BASED  
ON ADDITIONAL CONCEPTS**

<b>State</b>	<b>Artistic</b>	<b>Interpersonal</b>	<b>Achievement</b>	<b>No Concept</b>
Alabama			X	
Alaska				X
Arizona			X	
Arkansas				
California	X	X	X	
Colorado	X	X	X	
Connecticut	X			
Delaware	X	X	X	
District of Columbia				X
Florida			X	
Georgia			X	
Hawaii	X	X	X	
Idaho	X	X	X	
Illinois				X
Indiana	X	X		
Iowa	X	X	X	
Kansas				X
Kentucky	X	X		
Louisiana				X
Maine				X
Maryland	X	X	X	
Massachusetts				X
Michigan	X		X	
Minnesota				X
Mississippi	X			
Missouri				X
Montana			X	
Nebraska	X			
Nevada				X
New Hampshire				X
New Jersey			X	
New Mexico			X	
New York	X		X	

<b>State</b>	<b>Artistic</b>	<b>Interpersonal</b>	<b>Achievement</b>	<b>No Concept</b>
North Carolina			X	
North Dakota			X	
Ohio	X		X	
Oklahoma	X	X	X	
Oregon	X	X		
Pennsylvania				X
Rhode Island	X	X		
South Carolina	X			
South Dakota				X
Tennessee			X	
Texas	X	X	X	
Utah				X
Vermont	X	X		
Virginia	X		X	
Washington		X		
West Virginia				X
Wisconsin	X	X		
Wyoming			X	
<b>Total</b>	<b>23</b>	<b>16</b>	<b>24</b>	<b>15</b>
<b>Total as %</b>	<b>56.09%</b>	<b>39.02%</b>	<b>58.53%</b>	<b>36.58%</b>

**APPENDIX D: TABLE 4: STATE DEFINITIONS OF “GIFTED” BASED  
ON UNCOMMON CONCEPTS**

**APPENDIX D: TABLE 4: STATE DEFINITIONS OF “GIFTED” BASED  
ON UNCOMMON CONCEPTS**

<b>State</b>	<b>Learning</b>	<b>Miscellaneous</b>	<b>Populations</b>	<b>Motivation</b>	<b>Psychomotor</b>	<b>No Concept</b>
Alabama	X		X			
Alaska						X
Arizona	X					
Arkansas				X		
California						X
Colorado	X		X		X	
Connecticut	X					
Delaware					X	
District of Columbia						X
Florida			X			
Georgia				X		
Hawaii					X	
Idaho						
Illinois						X
Indiana		X*		X		
Iowa		X				
Kansas						X
Kentucky						X
Louisiana						X
Maine						X
Maryland						X
Massachusetts						X
Michigan		X				
Minnesota						X
Mississippi						X
Missouri	X					
Montana						X
Nebraska						X
Nevada						X
New Hampshire						X
New Jersey						X
New Mexico		X				
New York						X



State	Learning	Miscellaneous	Populations	Motivation	Psychomotor	No Concept
North Carolina						X
North Dakota						X
Ohio						X
Oklahoma						X
Oregon						X
Pennsylvania						X
Rhode Island						X
South Carolina						X
South Dakota						X
Tennessee						X
Texas						X
Utah						X
Vermont						X
Virginia		X				
Washington			X			
West Virginia						X
Wisconsin						X
Wyoming						X
<b>Total</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>34</b>
<b>Total as %</b>	<b>12.19%</b>	<b>12.19%</b>	<b>9.75%</b>	<b>7.31%</b>	<b>7.31%</b>	<b>82.92%</b>

**APPENDIX F: TABLE 5: STATE DEFINITIONS OF “GIFTED” BASED  
ON PRIORITY OF CONCEPTS**

**APPENDIX F: TABLE 5: STATE DEFINITIONS OF “GIFTED” BASED  
ON PRIORITY OF CONCEPTS 1-6**

<b>Concept</b>	<b>First</b>	<b>Second</b>	<b>Third</b>	<b>Fourth</b>	<b>Fifth</b>	<b>Sixth</b>
Gifted	33	5	1	-	-	-
Talented	1	19	3	-	-	-
High Ability	3	-	-	-	-	-
Intellectual	2	9	11	9	2	24
Academic	2	3	4	5	6	3
Creative	-	-	4	7	12	1
Achievement	-	4	14	3	1	1
Artistic	-	-	-	2	4	5
Interpersonal	-	-	-	1	-	7
Learning	1	1	1	-	1	1
Miscellaneous	-	-	-	-	2	1
Motivation	-	-	-	3	-	-
Psychomotor	-	-	-	-	-	-
Populations	-	-	1	1	-	1

**APPENDIX G: TABLE 6: STATE DEFINITIONS OF “GIFTED” BASED  
ON PRIORITY OF CONCEPTS 7-11 AND SCORES**

**APPENDIX G: TABLE 6: STATE DEFINITIONS OF “GIFTED” BASED  
ON PRIORITY OF CONCEPTS 7-11 AND SCORES**

<b>Concept</b>	<b>Seventh</b>	<b>Eight</b>	<b>Ninth</b>	<b>Tenth</b>	<b>Eleventh</b>	<b>Score</b>
Gifted	-	-	-	-	-	<b>10.82</b>
Talented	-	-	-	-	-	<b>9.91</b>
High Ability	-	-	-	-	-	<b>11.00</b>
Intellectual	-	-	-	-	-	<b>8.54</b>
Academic	3	4	-	-	-	<b>7.55</b>
Creative	1	1	-	-	-	<b>7.34</b>
Artistic	6	3	1	2	-	<b>5.34</b>
Achievement	1	-	-	-	-	<b>8.66</b>
Interpersonal	6	-	1	-	1	<b>5.25</b>
Learning	-	-	-	-	-	<b>8.60</b>
Miscellaneous	1	1	1	-	-	<b>5.33 (6.40)*</b>
Motivation	-	-	-	-	-	<b>8.00</b>
Psychomotor	-	1	1	-	1	<b>2.66</b>
Populations	1	-	-	-	-	<b>7.00</b>

\*First score based on each occurrence of "miscellaneous" as different definitions; second score based on actual amount of definitions in which "miscellaneous" occurs.

**APPENDIX H: TABLE 7: BIVARIATE ANALYSIS OF RESPONSE  
STRENGTHS OF SELECTED VALUES**

**APPENDIX H: TABLE 7: BIVARIATE ANALYSIS OF RESPONSE  
STRENGTHS OF SELECTED VALUES**

		<b>G Value</b>	<b>S Value</b>	<b>#27 Value</b>
<b>#9 Value</b>	Pearson Correlation	.179	.176	-.104
	Sig. (2-tailed)	.075	.079	.303
	N	100	100	100
<b>#18 Value</b>	Pearson Correlation	.134	.309**	
	Sig. (2-tailed)	.186	.002	
	N	99	99	
<b>#27 Value</b>	Pearson Correlation	-.087	-.158	
	Sig. (2-tailed)	.390	.116	
	N	100	100	
<b>T Value</b>	Pearson Correlation	.127	.182	
	Sig. (2-tailed)	.208	.069	
	N	100	100	

\*\*Correlation is significant at the 0.01 level (2-tailed).

**APPENDIX I: TABLE 8: AVERAGE AND MODAL RESPONSE  
STRENGTHS OF SELECTED VALUES**



**APPENDIX I: TABLE 8: AVERAGE AND MODAL RESPONSE  
STRENGTHS OF SELECTED VALUES**

Item	Average Value	Modal Value
Item #1	1.89	2
Item #2	1.99	2
Item #3	3.09	2
Item #4	2.34	2
Item #5	2.06	2
Item #6	1.72	1
Item #7	1.74	2
Item #8	2.45	2
Item #9	1.96	2
Item #10	3.52	4
Item #11	2.94	3
Item #12	2.78	3
Item #13	1.88	1
Item #14	3.34	4
Item #15	2.55	3
Item #16	2.55	3
Item #17	2.44	2
Item #18	2.19	1
Item #19	2.09	2
Item #20	2.00	1
Item #21	2.15	2
Item #22	2.45	2
Item #23	2.45	2
Item #24	2.14	2
Item #25	2.04	2
Item #26	2.11	2
Item #27	4.00	5

**APPENDIX J: MODIFIED ASSESSMENT OF KNOWLEDGE OF  
GIFTED INDIVIDUALS**

## APPENDIX J: MODIFIED ASSESSMENT OF KNOWLEDGE OF GIFTED INDIVIDUALS

Please answer each of the following twenty-seven (27) items. Rate each item either 1, 2, 3, 4, or 5:

1. I strongly agree
2. I agree
3. I have no opinion
4. I disagree
5. I strongly disagree

\_\_\_\_\_ 1. The term *gifted* can mean different things to different people and often causes confusion and miscommunication.

\_\_\_\_\_ 2. Intelligence can be developed and must be nurtured if giftedness is to occur and be maintained.

\_\_\_\_\_ 3. We seldom find very highly gifted children or the exceptionally gifted children we could call geniuses; therefore, we know comparatively little about them.

\_\_\_\_\_ 4. Thinking of, or speaking of, gifted children as superior people is inaccurate and misleading.

\_\_\_\_\_ 5. As schools are currently organized, it is not always possible for gifted children to receive appropriate educational experiences without special programs.

\_\_\_\_\_ 6. Equal opportunity in education does not mean having the same curriculum and activities for everyone, but rather educational experiences adapted to meet the specific needs of each child.

\_\_\_\_\_ 7. Gifted children, although interested in many things, usually are not gifted in everything.

\_\_\_\_\_ 8. Difficulty conforming to group tasks may be the result of the unusually varied interests or advanced comprehension of a gifted child.

\_\_\_\_\_ 9. Specialized training in gifted education is necessary for all teachers who work with gifted children to properly service their needs.

\_\_\_\_\_ 10. Teachers often see gifted learners as challenging their authority, disrespectful, and disruptive.

\_\_\_\_\_ 11. Some gifted children use their high level of verbal skill to avoid difficult thinking tasks.

\_\_\_\_\_ 12. The demand to create products or meet deadlines can inhibit the development of a gifted child's ability to integrate new ideas.

\_\_\_\_\_ 13. Work that is too easy or boring frustrates a gifted child just as work that is too difficult frustrates an average learner.

\_\_\_\_\_ 14. Most gifted children in our present school system are underachievers.

\_\_\_\_\_ 15. Commonly used sequences of learning are often inappropriate and can be limiting to gifted learners.

\_\_\_\_\_ 16. Gifted children, who can be very critical of themselves, often hold lower than average self-concepts.

\_\_\_\_\_ 17. Gifted children often expect others to live up to standards they have set for themselves, with resulting problems in interpersonal relations.

\_\_\_\_\_ 18. People who work with, study, and try to understand gifted children have more success educating the gifted than do those who have limited contact and have not educated themselves as to the unique needs of these children.

\_\_\_\_\_ 19. Gifted children are more challenged and more motivated when they work with students at their level of ability.

\_\_\_\_\_ 20. Some gifted children may perform poorly or even fail subjects in which they are bored or unmotivated.

\_\_\_\_\_ 21. The ability of gifted learners to generalize, synthesize, solve problems, study in depth, engage in abstract and complex thought patterns, and think at an accelerated pace most commonly differentiates gifted from average learners; therefore, programs for gifted students should stress using these abilities.

\_\_\_\_\_ 22. The persistent goal-directed behavior of gifted children can result in others perceiving them as stubborn, willful, and uncooperative.

\_\_\_\_\_ 23. If not challenged, gifted children can waste their ability and become mediocre, average learners.

\_\_\_\_\_ 24. Gifted children often express their idealism and sense of justice at a very early age.

\_\_\_\_\_ 25. Not all gifted children show creativity, leadership, or physical expertise.

\_\_\_\_\_ 26. I would be pleased to be considered gifted, and I enjoy people who are.

\_\_\_\_\_ 27. I know how to earn the Florida Gifted Education Certificate.

## **APPENDIX K: INSTITUTIONAL REVIEW BOARD APPROVAL**

## APPENDIX K: INSTITUTIONAL REVIEW BOARD APPROVAL



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

### Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**  
**FWA00000351, IRB00001138**

To: **Sherron E. Roberts and Co-PIs if applicable: Zachary C. Laschober**

Date: **September 27, 2012**

Dear Researcher:

On 09/27/2012, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review:	Exempt Determination
Project Title:	Perceptions of preservice teacher candidates towards gifted education training and obtaining the gifted education endorsement certificate in Florida
Investigator:	Sherron E. Roberts
IRB Number:	SBE-12-08683
Funding Agency:	
Grant Title:	
Research ID:	N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Patria Davis on 09/27/2012 11:57:11 AM EDT

A handwritten signature in black ink, appearing to read 'Patria Davis'.

IRB Coordinator

## **APPENDIX L: PEARSON INSTRUMENT APPROVAL LETTER**

## APPENDIX L: PEARSON INSTRUMENT APPROVAL LETTER



Legal/Permissions  
One Lake Street  
Upper Saddle River, NJ 07458  
Fax: 201-236-3290  
Phone: 201-236-3281  
Vineta.Lewis@Pearson.com

May 17, 2012

PE Ref # 169637

ZACHARY LASCHOB  
5315 Curtis Blvd.  
Cocoa, FL 32927

Dear Mr. Laschober:

You have our permission to include content from our text, *GROWING UP GIFTED: DEVELOPING THE POTENTIAL OF CHILDREN AT HOME AND AT SCHOOL*, 7th Ed. by CLARK, BARBARA, in your research at UNIVERSITY OF CENTRAL FLORIDA.

Your research is concerning the perceptions of preservice educators towards training in gifted education in Florida. The questionnaire would be distributed to several sections of the course, "Introduction to Diversity for Educators."

Content to be included is:

Questionnaire: Assessment of Knowledge of Gifted Individuals

Please credit our material as follows:

*CLARK, BARBARA, GROWING UP GIFTED: DEVELOPING THE POTENTIAL OF CHILDREN AT HOME AND AT SCHOOL*, 7th Edition, © 2008.

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Sincerely,  
Vineta Lewis, Permissions Supervisor



## **APPENDIX M: STATE DEFINITIONS OF “GIFTED”**

## **APPENDIX M: STATE DEFINITIONS OF “GIFTED”**

### **Alabama**

(1) Definition. Intellectually gifted children and youth are those who perform or who have demonstrated the potential to perform at high levels in academic or creative fields when compared with others of their age, experience, or environment. These children and youth require services not ordinarily provided by the regular school program. Children and youth possessing these abilities can be found in all populations, across all economic strata, and in all areas of human endeavor.

(Alabama Board of Education, 2011)

### **Alaska**

No definition located. However, gifted education included in statutes or regulations.

### **Arizona**

2. "Gifted pupil" means a child who is of lawful school age, who due to superior intellect or advanced learning ability, or both, is not afforded an opportunity for otherwise attainable progress and development in regular classroom instruction and who needs appropriate gifted education services, to achieve at levels commensurate with the child's intellect and ability.

(Arizona State Legislature, 2012)

### **Arkansas**

Gifted and talented children and youth are those of high potential or ability whose

learning characteristics and educational needs require qualitatively differentiated educational experiences and/or services.

Possession of these talents and gifts, or the potential for their development, will be evidenced through an interaction of above average intellectual ability, task commitment and /or motivation, and creative ability.

(Arkansas Department of Education, 2009)

### **California**

Each district shall use one or more of these categories in identifying pupils as gifted and talented. In all categories, identification of a pupil's extraordinary capability shall be in relation to the pupil's chronological peers.

(a) Intellectual Ability: A pupil demonstrates extraordinary or potential for extraordinary intellectual development.

(b) Creative Ability: A pupil characteristically:

(1) Perceives unusual relationships among aspects of the pupil's environment and among ideas;

(2) Overcomes obstacles to thinking and doing;

(3) Produces unique solutions to problems.

(c) Specific Academic Ability: A pupil functions at highly advanced academic levels in particular subject areas.

(d) Leadership Ability: A pupil displays the characteristic behaviors necessary for extraordinary leadership.

(e) High Achievement: A pupil consistently produces advanced ideas and products and/or attains exceptionally high scores on achievement tests.

(f) Visual and Performing Arts Talent: A pupil originates, performs, produces, or responds at extraordinarily high levels in the arts.

(g) Any other category which meets the standards set forth in these regulations.

(California Department of Education, 1983)

## **Colorado**

This definition was not located in statutes or regulations:

"Gifted and talented children" means those persons between the ages of five and twenty-one whose abilities, talents, and potential for accomplishment are so exceptional or developmentally advanced that they require special provisions to meet their educational programming needs. Children under five who are gifted may also be provided with early childhood special educational services. Gifted students include gifted students with disabilities (i.e. twice exceptional) and students with exceptional abilities or potential from all socio-economic and ethnic, cultural populations. Gifted students are capable of high performance, exceptional production, or exceptional learning behavior by virtue of any or a combination of these areas of giftedness:

General or specific intellectual ability.

Specific academic aptitude.

Creative or productive thinking.

Leadership abilities.

Visual arts, performing arts, musical or psychomotor abilities.

(Colorado Department of Education, 2012)

### **Connecticut**

As used in sections 10-76a-1, 10-76a-2, 10-76b-1 to 10-76b-4, inclusive, and 10-76d-1 to 10-76d-19, inclusive, of the Regulations of Connecticut State Agencies, the following words shall have the following meanings:

(1) ``Extraordinary learning ability" means a child identified by the planning and placement team as gifted and talented on the basis of either performance on relevant standardized measuring instruments, or demonstrated or potential achievement or intellectual creativity, or both. The term shall refer to the top five per cent of children so identified.

(2) ``Gifted and talented" means a child identified by the planning and placement team as (1) possessing demonstrated or potential abilities that give evidence of very superior intellectual, creative or specific academic capability and (2) needing differentiated instruction or services beyond those being provided in the regular school program in order to realize their intellectual, creative or specific academic potential. The term shall include children with extraordinary learning ability and children with outstanding talent in the creative arts as defined by these regulations.

(3) ``Outstanding talent in the creative arts" means a child identified by the planning and placement team as gifted and talented on the basis of demonstrated or potential achievement in music, the visual arts or the performing arts. The term shall

refer to the top five per cent of children so identified.

(Connecticut General Assembly, 2003)

## **Delaware**

(6) "Gifted or talented child" means a child in the chronological age group 4 through the end of the school year in which the child attains the age of 21 or until receipt of a regular high school diploma, whichever occurs first, who by virtue of certain outstanding abilities is capable of a high performance in an identified field. Such an individual, identified by professionally qualified persons, may require differentiated educational programs or services beyond those normally provided by the regular school program in order to realize that individual's full contribution to self and society. A child capable of high performance as herein defined includes one with demonstrated achievement and/or potential ability in any of the following areas, singularly or in combination:

- a. General intellectual ability;
- b. Specific academic aptitude;
- c. Creative or productive thinking;
- d. Leadership ability;
- e. Visual and performing arts ability;
- f. Psychomotor ability.

(Delaware Department of Education, 2012)

## **District of Columbia**

No definition located.

## **Florida**

(1) Gifted. One who has superior intellectual development and is capable of high performance.

(2) Criteria for eligibility. A student is eligible for special instruction programs for the gifted if the student meets criteria under (2)(a) or (b) of this rule.

(a) The student demonstrates: 1. Need for a special program. 2. A majority of characteristics of gifted students according to a standard scale or checklist, and 3. Superior intellectual development as measured by an intelligence quotient of two (2) standard deviations or more above the mean on an individually administered standardized test of intelligence.

(b) The student is a member of an under-represented group and meets the criteria specific in an approved school district plan for increasing the participation of under-represented groups in programs for gifted students.

1. For the purpose of this rule, under-represented groups are defined as groups: a. Who are limited English proficient, or b. Who are from low socio-economic status family.

2. The Department of Education is authorized to approve school district plans for increasing the participation of students from under-represented groups in special instructional programs for the gifted...

(3) Procedures for student evaluation. The minimum evaluations for

determining eligibility are the following: (a) Need for a special instruction program, (b) Characteristics of the gifted, (c) Intellectual development, and (d) May include those evaluation procedures specified in an approved district plan to increase the participation of students from under-represented groups in programs for the gifted.

Florida Department of Education, 2002)

## **Georgia**

### **(1) Definitions.**

(a) Gifted Student — a student who demonstrates a high degree of intellectual and/or creative ability(ies), exhibits an exceptionally high degree of motivation, and/or excels in specific academic fields, and who needs special instruction and/or special ancillary services to achieve at levels commensurate with his or her abilities.

Georgia Department of Education, 2002)

## **Hawaii**

"Gifted and talented children" means students residing in the State who are of compulsory school age and are enrolled in, and attending, a public school, and whose superior performance or potential indicates exceptional ability or talent. This ability or talent may occur singly in or in combination with any of the following areas: intellectual, creative or specific academic abilities, leadership capabilities, psychomotor abilities, or abilities in the performing or visual arts.

(Hawaii State Legislature, 2011)



## **Idaho**

(4)"Gifted/talented children" means those students who are identified as possessing demonstrated or potential abilities that give evidence of high performing capabilities in intellectual, creative, specific academic or leadership areas, or ability in the performing or visual arts and who require services or activities not ordinarily provided by the school in order to fully develop such capabilities.

(Idaho Board of Education, 2010)

## **Illinois**

No definition located. However, gifted education included in statutes or regulations.

## **Indiana**

"High ability student"Sec. 3. "High ability student" means a student who: (1) performs at or shows the potential for performing at an outstanding level of accomplishment in at least one (1) domain when compared with other students of the same age, experience, or environment; and (2) is characterized by exceptional gifts, talents, motivation, or interests.

"Domain"Sec. 2. "Domain" includes the following areas of aptitude and talent:

- (1) General intellectual.
- (2) General creative.
- (3) Specific academic.

(4) Technical and practical arts.

(5) Visual and performing arts.

(6) Interpersonal.

(Indiana General Assembly, 2012)

## **Iowa**

1. "Gifted and talented children" are those children who are identified as possessing outstanding abilities and who are capable of high performance. Gifted and talented children are children who require appropriate instruction and educational services commensurate with their abilities and needs beyond those provided by the regular school program.

2. Gifted and talented children include those children with demonstrated achievement or potential ability, or both, in any of the following areas or in combination:

- a. General intellectual ability.
- b. Creative thinking.
- c. Leadership ability.
- d. Visual and performing arts ability.
- e. Specific ability aptitude.

## **Kansas**

(bb) "Gifted" means performing or demonstrating the potential for performing at significantly higher levels of accomplishment in one or more academic fields due

to intellectual ability, when compared to others of similar age, experience, and environment.

### **Kentucky**

(n) "Gifted and talented student" means a pupil identified as possessing demonstrated or potential ability to perform at an exceptionally high level in general intellectual aptitude, specific academic aptitude, creative or divergent thinking, psychosocial or leadership skills, or in the visual or performing arts.

### **Louisiana**

A. Definition. Gifted children and youth are students who demonstrate abilities that give evidence of high performance in academic and intellectual aptitude.

C. Criteria for Eligibility

1. Preschool and Kindergarten. Evidence of criterion listed in Subparagraph a or b must be met:
  - a. the student shall obtain a score at least three standard deviations above the mean on an individually administered test of intellectual abilities appropriately standardized on students of this age and administered by a certified school psychologist or licensed psychologist; or
  - b. the student shall obtain a combined score of at least 10 when scores are entered into the cells of the Standard Matrix with at least 4 points earned on a test of intellectual abilities.
2. Grades 1-12. Evidence of criterion listed in Subparagraph a, b, or c

must be met:

a. the student shall obtain a score of at least two standard deviations above the mean on an individually or group administered test of intellectual abilities appropriately standardized on students of this age and administered by a certified school psychologist or licensed psychologist; or

b. the student shall obtain a score of at least seven when scores are entered into the cells of the Standard Matrix, at least two points of which is earned on the test of intellectual abilities; or

c. the student shall obtain a score of at least six when scores are entered into the cells of the Standard Matrix, and a recommendation for classification as gifted is made by pupil appraisal personnel who conducted the evaluation of the student in accordance with the evaluation procedures.

### **Maine**

No definition located. However, gifted education included in statutes or regulations.

### **Maryland**

In this subtitle, "gifted and talented student" means an elementary or secondary student who is identified by professionally qualified individuals as:

(1) Having outstanding talent and performing, or showing the potential for performing, at remarkably high levels of accomplishment when compared with other students of a similar age, experience, or environment;

(2) Exhibiting high performance capability in intellectual, creative, or artistic

areas

- (3) Possessing an unusual leadership capacity; or
- (4) Excelling in specific academic fields.

### **Massachusetts**

No definition located.

### **Michigan**

Sec. 2.

As used in this act:

(a) The “gifted and/or academically talented” means elementary and/or secondary school students who may be considered to be (1) intellectually gifted, (2) outstanding in school achievement, and/or (3) those who have outstanding abilities in particular areas of human endeavor, including the arts and humanities.

### **Minnesota**

No definition located.

### **Mississippi**

For purposes of Sections 37-23-171 through 37-23-181, the following terms shall have the following meanings unless the context shall prescribe otherwise:

(a) "Gifted children" shall mean children who are found to have an exceptionally high degree of intellect, and/or academic, creative or artistic ability.

**Missouri**

(2) "Gifted children", children who exhibit precocious development of mental capacity and learning potential as determined by competent professional evaluation to the extent that continued educational growth and stimulation could best be served by an academic environment beyond that offered through a standard grade-level curriculum;

**Montana**

As used in this part the following definitions apply: (1) "Gifted and talented children" means children of outstanding abilities who are capable of high performance and require differentiated educational programs beyond those normally offered in public schools in order to fully achieve their potential contribution to self and society. The children so identified include those with demonstrated achievement or potential ability in a variety of worthwhile human endeavors.

**Nebraska**

(3) Learner with high ability means a student who gives evidence of high performance capability in such areas as intellectual, creative, or artistic capacity or in specific academic fields and who requires accelerated or differentiated curriculum programs in order to develop those capabilities fully.

**Nevada**

As used in NRS 388.440 to 388.5317, inclusive:

1. “Gifted and talented pupil” means a person under the age of 18 years who demonstrates such outstanding academic skills or aptitudes that the person cannot progress effectively in a regular school program and therefore needs special instruction or special services.

### **New Hampshire**

No definition located.

### **New Jersey**

"Gifted and talented students" means those students who possess or demonstrate high levels of ability, in one or more content areas, when compared to their chronological peers in the local school district and who require modifications of their educational program if they are to achieve in accordance with their capabilities.

### **New Mexico**

A. Gifted child defined. As used in 6.31.2.12 NMAC, “gifted child” means a school-age person as defined in Sec. 22-13-6(D) NMSA 1978 whose intellectual ability paired with subject matter aptitude/achievement, creativity/divergent thinking, or problem-solving/critical thinking meets the eligibility criteria in 6.31.2.12 NMAC and for whom a properly constituted IEP team determines that special education services are required to meet the child’s educational needs.

B. Qualifying areas defined.

(1) “Intellectual ability” means a score two standard deviations above

the mean as defined by the test author on a properly administered intelligence measure. The test administrator must also consider the standard error of measure (SEM) in the determination of whether or not criteria have been met in this area.

(2) "Subject matter aptitude/achievement" means superior academic performance on a total subject area score on a standardized measure, or as documented by information from other sources as specified in Paragraph (2) of Subsection C of 6.31.2.12 NMAC.

(3) "Creativity/divergent thinking" means outstanding performance on a test of creativity/ divergent thinking, or in creativity/divergent thinking as documented by information from other sources as specified in Paragraph (2) of Subsection C of 6.31.2.12 NMAC.

(4) "Problem-solving/critical thinking" means outstanding performance on a test of problem-solving/critical thinking, or in problem-solving/critical thinking as documented by information from other sources as specified in Paragraph (2) of Subsection B of 6.31.2.12 NMAC.

## **New York**

a. As used in this article, the term "gifted pupils" shall mean those pupils who show evidence of high performance capability and exceptional potential in areas such as general intellectual ability, special academic aptitude and outstanding ability in visual and performing arts. Such definition shall include those pupils who require educational programs or services beyond those normally provided by the regular school program in order to realize their full potential.



## **North Carolina**

The General Assembly believes the public schools should challenge all students to aim for academic excellence and that academically or intellectually gifted students perform or show the potential to perform at substantially high levels of accomplishment when compared with others of their age, experience, or environment. Academically or intellectually gifted students exhibit high performance capability in intellectual areas, specific academic fields, or in both intellectual areas and specific academic fields. Academically or intellectually gifted students require differentiated educational services beyond those ordinarily provided by the regular educational program. Outstanding abilities are present in students from all cultural groups, across all economic strata, and in all areas of human endeavor.

## **North Dakota**

3. "Student who is gifted" means an individual who is identified by qualified professionals as being capable of high performance and who needs educational programs and services beyond those normally provided in a regular education program.

## **Ohio**

(B) "Gifted" means students who perform or show potential for performing at remarkably high levels of accomplishment when compared to others of their age, experience, or environment and who are identified under division (a), (b), (c), or (d)

of section 3324.03 of the revised code.

The Board of Education of each school district shall identify gifted students in grades kindergarten through twelve as follows:

(A) A student shall be identified as exhibiting "superior cognitive ability" if the student did either of the following within the preceding twenty-four months:

(1) Scored two standard deviations above the mean, minus the standard error of measurement, on an approved individual standardized intelligence test administered by a licensed psychologist;

(2) Accomplished any one of the following:

(a) Scored at least two standard deviations above the mean, minus the standard error of measurement, on an approved standardized group intelligence test;

(b) Performed at or above the ninety-fifth percentile on an approved individual or group standardized basic or composite battery of a nationally normed achievement test;

(c) Attained an approved score of one or more above-grade level standardized, nationally normed approved tests.

(B) A student shall be identified as exhibiting "specific academic ability" superior to that of children of similar age in a specific academic ability field if within the preceding twenty-four months the student performs at or above the ninety-fifth percentile at the national level on an approved individual or group standardized achievement test of specific academic ability in that field.

(C) A student shall be identified as exhibiting "creative thinking ability" superior

ot children of a similar age, if within the previous twenty-four months, the student scored one standard deviation above the mean, minus the standard error of measurement, on an approved individual or group intelligence test and also did either of the following:

(1) Attained a sufficient score, as established by the Department of Education, on an approved individual or group test of creative ability;

(2) Exhibited sufficient performance, as established by the Department of Education, on an approved checklist of creative behaviors.

(D) A student shall be identified as exhibiting "visual or performing arts ability" superior to that of children of similar age if the student has done both of the following:

(1) Demonstrated through a display of work, an audition, or other performance or exhibition, superior ability in a visual or performing arts area;

(2) Exhibited sufficient performance, as established by the Department of Education, on an approved checklist of behaviors related to a specific arts area.

## **Oklahoma**

As used in this act:

1. "Gifted and talented children" means those children identified at the preschool, elementary and secondary level as having demonstrated potential abilities of high performance capability and needing differentiated or accelerated education or services. For the purpose of this definition, "demonstrated abilities of high performance capability" means those identified students who score in the top

three percent (3%) on any national standardized test of intellectual ability. Said definition may also include students who excel in one or more of the following areas:

- a. creative thinking ability,
- b. leadership ability,
- c. visual and performing arts ability, and
- d. specific academic ability.

A school district shall identify children in capability areas by means of a multicriteria evaluation. Provided, with first and second grade level children, a local school district may utilize other evaluation mechanisms such as, but not limited to, teacher referrals in lieu of standardized testing measures;

## **Oregon**

As used in ORS 343.391 to 343.413, unless the context requires otherwise:

(4) "Talented and gifted children" means those children who require special educational programs or services, or both, beyond those normally provided by the regular school program in order to realize their contribution to self and society and who demonstrate outstanding ability or potential in one or more of the following areas:

(a) General intellectual ability as commonly measured by measures of intelligence and aptitude.

(b) Unusual academic ability in one or more academic areas.

(c) Creative ability in using original or nontraditional methods in thinking and producing.

(d) Leadership ability in motivating the performance of others either in educational or noneducational settings.

(e) Ability in the visual or performing arts, such as dance, music or art.

## **Pennsylvania**

Gifted student—

(i) A student who is exceptional under section 1371 of the School Code (24 P. S. § 13-1371) because the student meets the definition of “mentally gifted” in this section, and needs specially designed instruction beyond that required in Chapter 4 (relating to academic standards and assessment).

(ii) The term applies only to students who are of “school age” as defined under § 11.12 (relating to school age).

Mentally gifted—

Outstanding intellectual and creative ability the development of which requires specially designed programs or support services, or both, not ordinarily provided in the regular education program.

## **Rhode Island**

No definition located. However, gifted education included in statutes or regulations.

## **South Carolina**

1. Gifted and talented students are those who are identified in grades one

through twelve as demonstrating high performance ability or potential in academic and/or artistic areas and therefore require an educational program beyond that normally provided by the general school program in order to achieve their potential.

2. Gifted and talented abilities for these regulations include (a)

Academic and Intellectual Ability: Students who have the academic and/or intellectual potential to function at a high level in one or more academic areas.

(b) Visual and Performing Arts: Students who have the artistic potential to function at a high performance level in one or more of the fine arts.

### **South Dakota**

No definition located.

### **Tennessee**

(11) "Intellectually Gifted" means a child whose intellectual abilities and potential for achievement are so outstanding the child's educational performance is adversely affected. "Adverse affect" means the general curriculum alone is inadequate to appropriately meet the student's educational needs.

### **Texas**

In this subchapter, "gifted and talented student" means a child or youth who performs at or shows the potential for performing at a remarkably high level of

accomplishment when compared to others of the same age, experience, or environment and who:

- (1) exhibits high performance capability in an intellectual, creative, or artistic area;
- (2) possesses an unusual capacity for leadership; or
- (3) excels in a specific academic field.

### **Utah**

No definition located.

### **Vermont**

(a) "Gifted and talented children" means children identified by professionally qualified persons who, when compared to others of their age, experience or environment, exhibit capability of high performance in intellectual, creative or artistic areas, possess an unusual capacity for leadership or excel in specific academic fields.

### **Virginia**

"Gifted students" means those students in public elementary, middle, and secondary schools beginning with kindergarten through twelfth grade who demonstrate high levels of accomplishment or who show the potential for higher levels of accomplishment when compared to others of the same age, experience, or environment. Their aptitudes and potential for accomplishment are so outstanding

that they require special programs to meet their educational needs. These students will be identified by professionally qualified persons through the use of multiple criteria as having potential or demonstrated aptitudes in one or more of the following areas:

1. General intellectual aptitude. Such students demonstrate or have the potential to demonstrate superior reasoning; persistent intellectual curiosity; advanced use of language; exceptional problem solving; rapid acquisition and mastery of facts, concepts, and principles; and creative and imaginative expression across a broad range of intellectual disciplines beyond their age-level peers.

2. Specific academic aptitude. Such students demonstrate or have the potential to demonstrate superior reasoning; persistent intellectual curiosity; advanced use of language; exceptional problem solving; rapid acquisition and mastery of facts, concepts, and principles; and creative and imaginative expression beyond their age-level peers in selected academic areas that include English, history and social science, mathematics, or science.

3. Career and technical aptitude. Such students demonstrate or have the potential to demonstrate superior reasoning; persistent technical curiosity; advanced use of technical language; exceptional problem solving; rapid acquisition and mastery of facts, concepts, and principles; and creative and imaginative expression beyond their age-level peers in career and technical fields.

4. Visual or performing arts aptitude. Such students demonstrate or have the potential to demonstrate superior creative reasoning and imaginative expression; persistent artistic curiosity; and advanced acquisition and mastery of techniques,



perspectives, concepts, and principles beyond their age-level peers in visual or performing arts.

### **Washington**

As used in this chapter, the term highly capable student shall mean a student who has been assessed to have superior intellectual ability as demonstrated by one or more of the multiple criteria specified in WAC 392-170-040. These students exhibit high capability in intellectual and/or creative areas, possess an unusual leadership capacity, or excel in specific academic fields, thereby requiring services beyond the basic programs provided by schools. Outstanding abilities are present in students from all cultural groups, across all economic strata, and in all areas of human endeavor.

The multiple criteria for the determination of students with superior intellectual ability shall include the following:

(1) "Cognitive ability" which for the purpose of this chapter shall be defined as the complete range of intellectual functions referred to as intellect, intelligence, or mental abilities and includes such psychological concepts as thinking, abstract reasoning, problem solving, verbal comprehension, and numerical facility.

(2) "Specific academic achievement in one or more major content areas" which for the purpose of this chapter shall be defined as obtained results on an achievement test appropriate to discriminate academic performance at high levels of achievement in one or more of the following content areas:

- (a) Reading;
- (b) Mathematics;
- (c) Social studies;
- (d) Language arts; and
- (e) Science.

(3) "Exceptional creativity" which for the purpose of this chapter shall mean the demonstration of unique or outstanding creative products and/or the demonstration of unusual problem solving ability or other learning characteristics which indicate to teachers, parents, or classmates that the student has the intellectual potential to perform academically at a level significantly higher than the norm for the chronological grade level.

#### **West Virginia**

No definition located.

#### **Wisconsin**

(1) In this section, "gifted and talented pupils" means pupils enrolled in public schools who give evidence of high performance capability in intellectual, creative, artistic, leadership or specific academic areas and who need services or activities not ordinarily provided in a regular school program in order to fully develop such capabilities.

## **Wyoming**

(c) In addition to subsection (b) of this section, each school district within this state shall provide programs designed for the special needs of those student populations specified within this subsection. Programs under this subsection shall be provided and shall identify special student populations in accordance with rules and regulations of the state board of education. The state board shall monitor the proportion of students in each special needs category, compared to available regional averages. Special needs student populations include:

(ii) Gifted and talented students identified by professionals and other qualified individuals as having outstanding abilities, who are capable of high performance and whose abilities, talents and potential require qualitatively differentiated educational programs and services beyond those normally provided by the regular school program in order to realize their contribution to self and society.

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