GIFTED AND TALENTED SELECTION CRITERIA OF NORTH CAROLINA: AN INVESTIGATIVE STUDY

by

Jan Darice Johnson Johnson

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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APPROVED BY:

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ABSTRACT

The purpose of this research study was to examine the correlation between the alternative gifted selection criteria (e.g., Pathways, Gateways**,** and Multiple Assessment Combinations) used in six counties in North Carolina for the placement of selected Non-White populations into the gifted and talented (GT) program, in order to identify whether alternative gifted selection criteria were correlated. A correlation design was used in this quantitative research study based on the examination of ex post facto data. The paradigm for this study was pragmatism, as developed by Dewey (1938; 1964), in which it is held that truth is tested by consequences and beliefs (Creswell, 2006). The selected ethnic populations were African American, Native American**,** and Hispanic. Six counties in North Carolina were identified through a stratified sampling method. In these counties, there were active GT programs in the elementary schools, where varying traditional and alternative gifted selection criteria were used. The selected counties were located in the northern, southern, eastern, and western regions of North Carolina. The alternative gifted selection criteria was reviewed and analyzed. Statistical data and alternative gifted criteria were collected at the county/district and state levels. Pearson Chi-Square statistics were performed using the Microsoft Office Excel program. The statistical analysis results indicated that the observed differences in how African American students were placed into Academically and Intellectually Gifted (AIG) programs (Pathways, Gateways, and Multiple Assessment Combinations) could be related to the ethnicity of the students. Whereas, the results indicated that the observed differences in how Native American and Hispanic students were placed into AIG programs (Pathways, Gateways, and Multiple Assessment Combinations) could not be related to the ethnicity of the students.

Dedication

It is my pleasure to proudly dedicate this document to my family. My husband, Robert and children, Robert II and Robyn have been there for me from the very onset of my matriculation efforts. My parents, Darius and Janie, now deceased, always encouraged my educational journey and inspired me to strive for the best as I "put my best foot forward!" Although Mom and Dad are not physically here today, I know they are with me in spirit and have been my "cheerleaders from heaven" the entire journey! My husband encouraged me to "keep going" when I wanted to venture away from my tedious schedule. He kept the household functioning while I spent countless hours conducting research, surfing the internet, and typing the entire document. Robert exuded the qualities of an exceptional "help mate" and consistently demonstrated God's love as he supported me through this amazing journey.

Robert II and Robyn were there as gentle encouragers and always told me how proud they were of me. This alone was all that was needed to keep me focused and on the right path. They told me that, because of my educational journey, they are inspired to advance in their educational endeavors. What more could I have asked for than to be a source of inspiration for my children!

Thank you, Mom, and Dad for planting the seed! ~ Thank you, Robert, Robyn and Robert II for sharing in the watering process as you assisted me to blossom to my fullest potential as an educator. I love and appreciate you all so very much!

Acknowledgments

To God be the glory, great things He has done! ~ Giving honor to God for his numerous blessings, I realize that this accomplishment would not have been possible without Him. God was my source of grace, strength and mercy throughout this journey and continues to be today! I truly believe that without God nothing is possible and with Him all things are possible.

I would like to acknowledge my Dissertation Committee Chair, Dr. Shanté Moore-Austin whose encouragement and support have been immeasurable. You always reminded me to stay positive and never lose sight of my goal. You were always available and never too busy to render assistance.

To my committee members, Dr. Joan Montgomery, thank you for your words of encouragement, which always came when I needed them most. Thank you for the little "reminders" along the way. Thank you, Dr. Joan Fitzpatrick for testing my endurance as I ran this race with dignity and grace. As a result, in many ways I am a much stronger person. Dr. Holder, my Research Consultant, you have taught me that "more" is not always better. I have learned that overall effectiveness is achieved through less ambiguity.

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Adequate Yearly Progress (AYP)

Academically and Intellectually Gifted (AIG)

Center for Disease Control (CDC)

Children's Personality Questionnaire (CPQ)

Culturally and Linguistically Diverse (CLD)

Clinical Analysis Questionnaire (CAQ)

Elementary and Secondary Education Act (ESEA)

Gifted Rating Scale (GRS)

Gifted and Talented (GT)

Individuals with Disabilities Education Act (IDEA) Policy Documents

Institutional Review Board (IRB)

Intelligence Quotient (IQ)

Local Education Authorities (LEAs)

Multiple Intelligence (MI)

National Association for Gifted Children (NAGC)

No Child Left Behind Act (NCLB)

North Carolina Department of Public Instruction (NCDPI)

Office of Civil Rights (OCR)

State Board of Education (SBE)

Traits, Aptitudes, and Behaviors (TAB)

U.S. Department of Education (U.S. DOE)

U.S. Office of Educational Research and Improvement (USOERI)

CHAPTER ONE: INTRODUCTION

As United States educators embrace educational reform and preparation of students for the 21st century, the educational disparities among the members of ethnic groups are a topic of much research. As opportunities are extended for those identified as gifted and talented (GT), numerous researchers (Ford, 1998; Ford, Grantham & Whiting, 2008; Ford, Tarek, & Whiting, 2008) indicated that African American, Native American, and Hispanic American populations were underrepresented in those programs. The purpose of this quantitative correlation ex post facto research study was to determine whether there was a correlation between the alternative selection criteria, specifically Pathways, Gateways, and Multiple Assessment Combinations of gifted programs, and the placement of Non-White students (e.g., African American, Native American, and Hispanic) into the gifted programs.

Background

Historically, the African American, Native American, and Hispanic populations have been and continue to be underrepresented in gifted programs (Ford, 1998; Ford et al., 2008). The issue that continues to concern the educators and families of these ethnic populations is whether the selection criteria have a direct influence on the placement of these students into GT programs. As the underrepresentation of African American and Native American populations in GT programs have been assessed, the realization that these populations were overrepresented in special education classes was notable (Donovan & Cross, 2002). Members of these minority populations that qualify for GT programs may chose not to participate or remain in the programs (College Board, 2007). Reasons for the lack of retention in gifted programs include the fact that parents had the opportunity to choose whether their children participated in these programs (Bui, Imberman, & Craig, 2012). Sometimes, after students were admitted to gifted programs, their

grades began to decline, which affected their class ranking. As a result, many students' motivation to participate in gifted programs diminished, particularly on the middle and high school levels. Also, students who acceded to negative peer pressure did not choose to participate in gifted programs due to social isolation and alienation (Ford, 1996, 1998). Self-esteem, self-concept, and for ethnically diverse students', racial identity development issues affected academic success (Grantham & Ford, 1998). Although Terman (1925) was well-known for his revisions to the Stanford-Binet Intelligence Scales and the findings from his longitudinal study on GT students, he concluded that intellectual ability was inherited and the environment played an integral part in the support of a child's intellectual ability (Jolly, 2008; Seagoe, 1975; Terman, 1925, 1930).

Some researchers (Coleangelo & Zaffrann, 1979; Job, 2012) have maintained that children from culturally diverse environments were not being recognized for their academic potential. Also, the use of standard Intelligence Quotient (IQ) scores did not identify those children's abilities. As stated by Van Tassel-Baska (2000),

> Our task is not to be gatekeepers to exclude students but rather custodians of promoting student growth by recognizing discernible strengths and working with the school community to enhance them whether through gifted programs or another medium. (p. 1)

Milner and Ford (2007) maintained that it was essential for elementary school teachers to identify and place gifted Non-White students in GT programs. They found that, as a teacher's cultural awareness and competence developed, it was easier for him or her to identify the gifted potential of underrepresented students. Milner and Ford (2007) emphasized that teachers were the forerunners in the recruitment, identification, and retention process of gifted students.

According to the gifted education requirements of the state of North Carolina, each school district was required to develop a three year plan, which was designed to provide appropriate educational services to the academic and/or intellectually gifted students in their district (North Carolina Department of Public Instruction [NCDPI], 2013). Each school district within the counties of North Carolina based their GT program plan on the North Carolina Academically Gifted Program Standards, which were adopted by the State Board of Education in July of 2009. The North Carolina GT program standards were comprised of six essential components with accompanying best practices to guide the plan for each school district. The current six standards are listed as follows (a) student identification, (b) differentiated curriculum and instruction, (c) personnel and professional development, (d) comprehensive program within a total school community, (e) partnerships, and (f) program accountability.

The original, traditional acceptance criteria (NCDPI, 2013) were: (a) assessment screening (aptitude, achievement, intelligence, and other screenings), (b) classroom performance, (c) classroom observations, (d) documented observations, and (e) anecdotal information. The alternative acceptance criteria varied from district to district and were primarily determined by the student population. Frequently, alternative assessments were administered from approved alternative assessment lists, which included nationally-normed non-verbal assessments (see Figure 1).

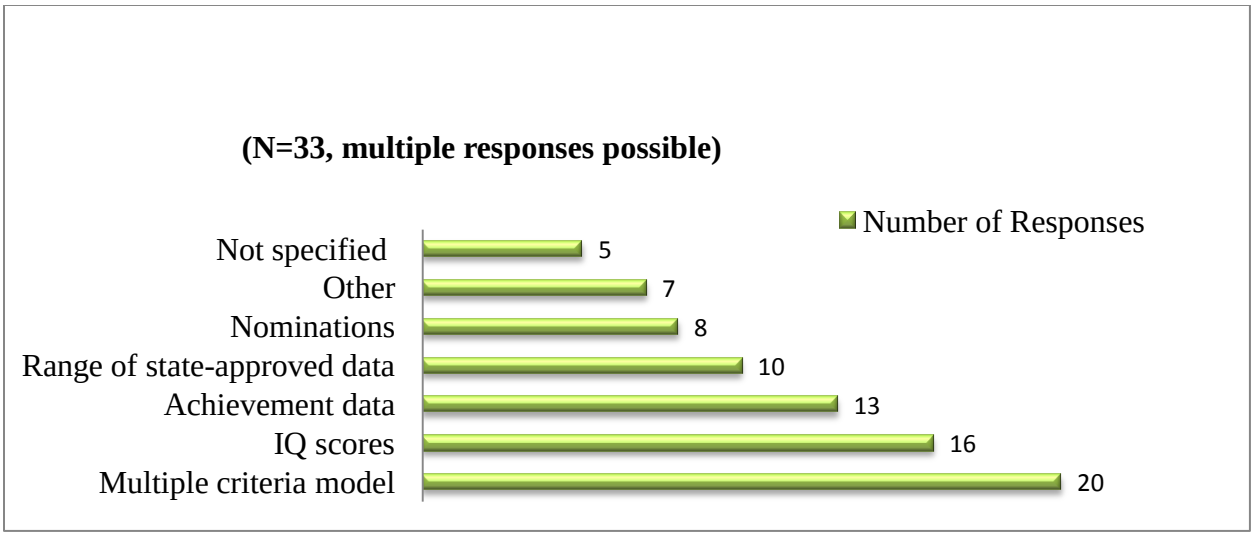

Figure 1. Criteria/Methods Required for Identification.

Note. The graph shows Criteria Methods Required for Identification as reported in the State of the State 2010-2011 Report.

Theoretical Framework

The theoretical framework for this study is based on Gardner's (1983) Theory of Multiple Intelligences (MI). In Gardner's theory, he viewed intelligence as a multifaceted entity opposed to one, general ability. Gardner's nine intelligences are: (a) spatial, (b) logical-mathematical, (c) bodily kinesthetic, (d) naturalistic, (e) linguistic, (f) musical, (g) interpersonal, (h) intrapersonal, and (i) existential. After careful consideration of the nine intelligences, Gardner determined that all were distinct intelligences and related to moral intelligence. Therefore, he included moral intelligence as intelligence. The focus of this current study was on the selection criteria for GT programs in North Carolina. In most programs, giftedness was addressed in regard to the area of academics; however, in many programs, other intelligences were acknowledged as well. Many Non-White students possess gifts and talents, which are nontraditional; therefore, the students are not recognized as gifted (Gardner, 1980). The theory of MI supports the need for the use of alternative gifted selection criteria. In North Carolina, traditional and non -traditional/alternative

criteria are part of the GT identification process. With use of these criteria, the presence of other intelligences can be addressed, holistically, in order to differentiate the educational needs of children.

In Vygotsky's (1978) Social Cultural Theory, there is additional theoretical support for the need of alternative gifted selection criteria. Vygotsky (1978, 1986, 1987) defined learning as the interaction between people and the culture in which they lived. Vygotsky (1978) believed that oral language played an essential role in mental development. Also, he emphasized that learners should be provided with socially rich environments, which foster exploration, and where learners can gain knowledge from their classmates, teachers, and other influential people (Langford, 2005; Vygotsky, 1978). Vygotsk (1987, as cited in Turuk, 2008) identified three ways that learning is passed from one person to another: (a) through imitation or copying the actions of another; (b) through memory of the teacher's instructions and then use the instructions to govern one's behavior; and (c) through collaborative learning, where peer groups work together to understand each other as they learn specific skills.

Typically, the development of higher order cognitive skills originate from interactions with parents, peers, guardians, and the culture, while cognitive skill development is also manifested through individual correlations (Vygotsky, 1987). Vygotsky discovered that students developmentally, socially, and intellectually thrived at varying periods in life. Vykotsky's concept of the zone of proximal development (ZPD) is an essential element of his Social Cultural Theory. The ZPD encompasses every skill and the acquisition of knowledge that one could perform with guidance, rather than alone (Vygotsky, 1978).

Many GT students possess skills and talents, which are attained only with assistance; if students are nurtured appropriately, independence can be attained through guided practice

(Langford, 2005; Vygotsky, 1978). When learning is either too easy or too difficult for students, they lose interest. If the learning is appropriately challenging, the child's interest will be encouraged and supported. Vygotsky (1978) maintained that learning encompasses more than one's ability to think, rather, it is one's ability to think about many things. Many GT children are able to function within the ZPD, but need the support in order to meet new challenges.

Problem Statement

The problem, which is addressed in this study, is that African American, Native American, and Hispanic students are underrepresented in GT elementary school programs in many counties of North Carolina as indicated in the North Carolina GT Plans for 2010-2013 (NCDPI, 2013). Colangelo and Zaffrann (1979) as well as Job (2012) maintained that academic potential of culturally diverse children is not recognized and the use of standard IQ scores does not identify these children's abilities. From a review of the related literature, there are only a limited number of studies in which the topic of alternative selection criteria for the gifted are addressed (e.g., Pathways, Gateways, and Multiple Assessment Combinations) and their correlation to the placement of African American, Native American, and Hispanic students into elementary GT programs. No research was found which addressed whether there was a relationship between the alternative selection criteria, specifically Pathways, Gateways, and Multiple Assessment Combinations and the placement of Non-White students in gifted programs.

This researcher believed that the underlying question was whether or not there was a correlation between the alternative gifted selection criteria, specifically Pathways, Gateways, and Alternative assessments and the placement of African American, Native American, and Hispanic students into the elementary gifted programs.

As noted by several researchers (Donovan & Cross, 2002; Ford, 1998; Ford et al., 2008), African American and Hispanic populations continue to be underrepresented in GT programs. There may be a correlation between gifted selection criteria for the school districts in six selected counties of North Carolina and the underrepresentation of Native American, African American, and Hispanic students in the gifted programs.

Grantham (2011) addressed the underrepresentation of African American males in GT education programs; he reported that some educators were aware of the discrepancies, but chose to take no action. Archibald and Qian (2009) addressed the academic and nonacademic factors and the roles these factors play in the disproportionate representation of African American students in Advanced Placement classes. In addition, Archibald and Qian (2009) were concerned about the influence of a student's race or ethnicity in the prediction of track placement. They found that teachers' attitudes were influential in their recommendation of many gifted students for placement into gifted programs. Other researchers (DeWet & Gubbins, 2011; McCoach, 2007) found that teacher' beliefs and biases, in regard to the academic abilities of culturally and linguistically gifted students from low socioeconomic backgrounds affected their judgment about placement of these students.

Purpose Statement

Certain Non-White populations continue to be underrepresented in GT programs (Donovan & Cross, 2002; Ford, 1998; Ford et al., 2008; Grantham, 2011). The purpose of this quantitative correlational, ex post facto research study was to determine whether a correlation existed between use of alternative gifted selection criteria (e.g., Pathways, Gateways, and Alternative assessments (NCDPI, 2013a) and the placement of African American, Native American, and Hispanic students into the elementary gifted programs.

The independent variable in this study was the gifted alternative selection criteria, specifically Pathways, Gateways, and Multiple Assessment Combinations. These criteria were defined as the non-traditional/alternative measures used for the identification and placement of Non-White students (e.g., African American, Native American, and Hispanic) who qualified for the elementary gifted programs. The dependent variable was the number of Non-White students placed in gifted programs, which was defined as the number of students, who were identified and/or received gifted services. The control variable was the students' geographical locations. Other variables included: (a) variations in gifted definitions, (b) race, (c) cultural differences, (d) availability of alternative assessments, (e) program funding, and (f) variations in selection criteria.

Significance of the Study

Extensive educational research has been conducted in regard to the underrepresentation of Non-White populations in various educational arenas (Brown et al., 2005; DeWet & Gubbins, 2011; Hala, 2008). However, the relationship between use of alternative selection criteria (e.g., Pathways, Gateways, and Alternative assessments) and the placement of African American, Native American, and Hispanic students into elementary GT programs has not been documented. The findings from this study may provide insights for potential solutions to the problems associated with the underrepresentation of these Non-White populations in elementary gifted programs, as related to the utilization of alternative selection criteria.

The results from this study may suggest that use of alternative gifted selection criteria may be a tool to determine placement of Non-White students in elementary GT programs. An examination of the alternative selection criteria revealed the solutions to the underrepresentation of Non-White (African American, Native American, and Hispanic) students in GT programs in

North Carolina. Hopefully, strategies to improve the underrepresentation of these Non-White populations in GT programs will be suggested and opportunities for implementation will be accepted by decision makers in an effort to move toward positive transformations as a result of this study. Additionally, the present state of the underrepresentation of these Non-White populations in the elementary GT programs as it is ultimately known will be resolved.

Research Questions

The following question guided this quantitative correlation research study.

RQ1: Is there a significant relationship between the alternative gifted selection criteria (Pathways, Gateways, and Multiple Assessment Combinations) used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American**, **Native American**, and **Hispanic** students into gifted and talented programs?

Staffs at the individual school districts in North Carolina were at liberty to select non-traditional/alternative GT selection criteria, which were appropriate for the student population at their school. Currently, the school districts, which were selected for this study were implemented alternative gifted selection criteria and utilized traditional state mandated criteria for placement of Non-White populations into the GT programs. Various non-traditional/alternative criteria included: Pathways, Gateways, and Alternative assessments (NCDPI, 2013). The research questions were designed to guide this researcher in the direction of this topic.

Research Hypotheses

The research hypotheses developed by this researcher are:

H_1: There is a significant relationship between the alternative gifted selection criteria, specifically *Pathways*, used for the identification of students in selected North Carolina counties

and the placement of traditionally underrepresented **African American** students into GT programs.

H_2: There is a significant relationship between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American** students into GT talented programs.

H_3: There is a significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combinations*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American** students into GT programs.

H_4: There is a significant relationship between the alternative gifted selection criteria, specifically *Pathways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs.

H_5: There is a significant relationship correlation between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs.

H_6: There is a significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combinations*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs.

H_7: There is a significant relationship between the alternative gifted selection criteria,

specifically *Pathways*, used for the identification of students in selected North Carolina counties, and the placement of traditionally underrepresented **Hispanic** students into GT programs.

H_8: There is a significant relationship between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Hispanic** students into GT programs.

H_9: There is a significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combina*tions, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Hispanic** students into GT programs.

The alternative null hypotheses for this research study are:

H_{01}: There is no significant relationship between the alternative gifted selection criteria, specifically *Pathways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American** students into GT programs.

H_{02}: There is no significant relationship between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American** students into GT talented programs.

H_{03}: There is no significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combinations*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American** students into GT programs.

H_{04}: There is no significant relationship between the alternative gifted selection criteria,

specifically *Pathways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs.

H_{05}: There is no significant relationship correlation between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs.

H_{06}: There is no significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combinations*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs.

H_{07}: There is no significant relationship between the alternative gifted selection criteria, specifically *Pathways*, used for the identification of students in selected North Carolina counties, and the placement of traditionally underrepresented **Hispanic** students into GT programs.

H_{08}: There is no significant relationship between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Hispanic** students into GT programs.

H_{09}: There is no significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combina*tions, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Hispanic** students into GT programs.

Identification of Variables

The independent variable in this study was the gifted alternative selection criteria used in the six school districts, specifically Pathways, Gateways, and Multiple Assessment Combinations. These selection criteria were defined as the non-traditional/alternative measures used for the identification and placement of Non-White students (e.g., African American, Native American, and Hispanic) who qualified for the elementary gifted programs. The dependent variable was the number of Non-White students placed in gifted programs, which was defined as the number of students (African American, Native American, and Hispanic) who were identified and received gifted services. The control variable was their geographical location. Other variables included: (a) variations in gifted definitions, (b) cultural correlations, (c) language barriers, (d) availability of alternative assessments,(e) assessment administration locations, (f) program funding, and (g) variations in selection criteria.

Definition of Terms

African American: The term, African American, is defined as "A person having origins in any of the Black racial groups of Africa would be considered African American. It includes people who indicate their race as Black, African American or Negro or report entries such as African American, Kenyan, Nigerian, or Haitian" (U.S. Census Bureau, 2010, p. 1). Also, staff at the Center for Disease Control, and Prevention (2012) defined African Americans as people who originated from black ethnic groups of Africa and those of Afro-Caribbean descent.

Assessment: "An assessment encompassed regularly monitored student performance and conducting error analyses; therefore, teachers comprehensively identified the strengths and weaknesses of the students and modified instruction accordingly" (Cody & Moore, 2010, p. 8).

Multiple Assessment Combinations: Non-traditional assessments, which were used as selection criteria to identify GT students. Many of those assessments were non-verbal, intelligence and achievement tests. There were combinations of criteria which were acceptable for placement into gifted programs depending upon the scores the student receives. The Multiple Assessment Combinations included authentic assessments, checklists, portfolios, and/or rubrics (NCDPI, 2013).

Native American: This term refers to U.S. Indians, who are affiliated with 10 major tribal groupings: (a) Apache, (b) Cherokee, (c) Chippewa, (d) Choctaw, (e) Creek, (f) Iroquois, (g) Lumbee, (h) Navajo, (i) Pueblo, and (j) Sioux (Alliance for Excellence, 2008). The tribes which are represented in this study are mainly Lumbee and Cherokee. Also, Native Americans are identified by the names: (a) Indians, (b) First Nations, (c) Native Americans, (d) Indigenous Peoples, and (e) Alaska Natives. Although the above names were often used, tribal names are most often preferred. (Native American Census and Alaska Native Census, 2010).

Non-White Population: The selected Non-White populations referred to in this research study included African American, Native American, and Hispanic.

Gateways: Various alternate identification criteria used for placement of students into GT programs (NCDPI, 2013).

Gifted and Talented (GT): The term, Gifted and Talented (GT), was not universally defined. Each state had its own definition of GT, although there are many similarities. North Carolina was the geographic location for this study, and the definition of GT Talented was very relevant. The definition of giftedness for the State of North Carolina is:

> The General Assembly believes the public schools should challenge all students to aim for academic excellence and that academically or intellectually gifted (AIG) students

> perform or show the potential to perform at substantially high levels of accomplishment when compared to others of their age, experience and environment. AIG students exhibit high performance capability in intellectual areas, specific academic fields, or in both intellectual areas and specific academic fields. AIG 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 Carolina General Statute § 115C-150.5, Article 9B).

Hispanic: The term Hispanic originated from the federal government during the Nixon era of the 1970s. This term is used to affiliate people who are associated with the Spanish language or culture, primarily distinguished by the language (Hispanic & Latino Culture Traits, 2012). In a subsequent definition for the term, Hispanic, it was reported as "Hispanics were people who classified themselves in one of the specific Spanish, Hispanic, or Latino categories, Mexican, Puerto Rican, or Cuban, labeled as another Hispanic, Latino, or Spanish origin were from Spain, countries of Central or South America, or the Dominican Republic. The terms Hispanic, Latino, and Spanish were used interchangeably" (United States Census, 2010). This author chose to use Hispanic, and this term is used throughout the dissertation.

Javits Act: The Javits Gifted and Talented Students Education Act (Javits, 1999) was named for the New York Senator Jacob Javits, and the Javits Act was initially voted upon in 1988. This act was designed to recognize, and support student talent development in schools. The definition according to the Javits Act was:

> The term GT student means children and youths who give evidence of higher performance capability in such areas as intellectual, creative, artistic, or leadership

> capacity, or in specific academic fields and who require services or activities not ordinarily provided by the schools in order to develop such capabilities fully. (Javits Act, 1999, p. 1)

According to the report entitled National Excellence and Developing Talent (U.S. Department of Education, 1993), the term, gifted, was dropped. Instead, the term, outstanding talent was used, and the authors concluded with the sentence: "Outstanding talents are present in children and youth from all cultural groups, across all economic strata and in all areas of human endeavor" (p.1).

Pathways: Alternate methods of identification based on different criteria for acceptance into GT programs (NCDPI, 2013).

Traditionally underrepresented: The term, traditionally underrepresented, for the purpose of this research study includes the following groups: African American, Native American, and Hispanic (U.S. Department of Education, 2007).

Research Summary

The author used a quantitative, correlation design in this study. The researcher sought answers to the following research question which had two components: Is there a correlation between the alternative gifted selection criteria, specifically Pathways, Gateways, and Alternative Assessment Combinations and the placement of Non-White students in selected North Carolina counties? After a review of the related literature, the researcher was unable to find studies in which researchers addressed and examined these questions relative to the alternative gifted selection criteria of North Carolina and the impact it had on the placement of Non-White elementary gifted students into the program.

The researcher focused on six counties/districts in North Carolina with selected Non-White populations being serviced in elementary GT programs relative to all students being served in the elementary GT programs. Demographic statistics of African American, Native American, and Hispanic students accepted into the GT programs were collected by district. The data were disaggregated in order to consider: (a) gender, (b) ethnicity, (c) English as a Second Language services, and (d) the use of various alternative criteria for the placement of students into the gifted program from 2012-2013. These statistical data were useful in determining whether there had been a change in the number of students placed among these selected populations as a result of the alternative gifted selection criteria and to determine why the alternative selection criteria had a correlation. An analysis of these data was conducted with use of the Pearson Chi- Squared test of association. An examination of the relationship between the alternative criteria and the placement of selected underrepresented Non-White populations was made and expounded upon.

Assumptions

The researcher assumed that different identification procedures for placing students into the gifted programs were used in the selected school districts participating in the study. The researcher assumed that a correlation may or may not have existed between the gifted alternative selection criteria, specifically Pathways, Gateways, and Multiple Assessment Combinations and the placement of Non-White students into the gifted programs of the selected elementary school districts of North Carolina. The researcher assumed that the variables in the study were described adequately, and the selected sample size was representative of the population.

Limitations

Although the research was carefully conducted, the researcher was aware of possible limitations of the research study. Only a small portion of the entire elementary school population of the state of North Carolina was considered during this study, which encompassed six counties. To generalize the results for a larger population, it would have been necessary to include more counties in the study. The specifically identified school districts were selected because they were representative of each region of North Carolina. Another limitation to the study was the timeframe during which the data were collected. The data for this study represented a period of one year. If longitudinal data had been examined, the results might have yielded a different conclusion.

The researcher was aware of potential threats to internal validity, which included history and selection. Through the collection of as much detailed procedural information as possible and the selection of the appropriate research design, the threats to internal validity from history and selection were minimized. In an effort to maximize external validity, the researcher carefully defined the variables and used a stratified random selection of participants.

CHAPTER TWO: LITERATURE REVIEW

Introduction

Gifted and Talented (GT) programs were designed to offer students many opportunities to participate in accelerated classes and activities based on their advanced intelligence in academics, the arts and/or physical ability. Students who possessed special gifts and talents were discovered in all cultures and their recognized abilities were greatly valued within their cultures (Cohen, 1988). Non-White students (African American, Native American, and Hispanic) were often overlooked or received less referrals for participation in GT programs for many reasons. Although many Non-White students qualified for gifted programs, they chose not to participate. Teachers often exemplified biases based on a student's socioeconomic status, cultural background, or ethnicity. The teachers' biases often interfered with their ability to make sound judgments and hindered their objective consideration of Non-White students for GT programs (Hala, 2008).

The underrepresentation of Non-White students (African American, Native American, and Hispanic) could have related to the selection criteria for the GT programs. The counties that were considered in this study had higher counts of the African American, Native American, and Hispanic populations than others. The data collected from the research was used to determine whether or not there was a correlation between the GT alternative selection criteria and the placement of Non-White students into the GT program.

The review of the literature: (a) revealed the theoretical framework of the literature; (b) addressed the history of gifted education, and (c) focused on funding for GT programs. The review of the literature also (d) defined giftedness; (e) focused on disparity of Non-White

students (Native American, African American, and Hispanic); and (f) identified the variations in gifted identification and selection criteria.

Theoretical Framework

Howard Gardner was inspired by the works of Jerome Bruner, Jean Piaget and Eric Erikson after having studied under them while attending Harvard College. The works these men had done with developmental psychology profoundly influenced Gardner so much that he changed his course of study from law to psychology, and later his studies expanded to include neuropsychology focusing on cognition (Dixon & McPhee, 2001; Smith & Smith, 1994). Gardner was deeply interested in studies that related to the use of symbols with normal and gifted children as well as those with brain damage. Gardner's theory was based on two concepts which first included brain organization (neurobiological) in gifted and brain damaged patients which further supported his definition of intelligence; the second concept was the correlation between the influences of culture on intelligence.

While most traditional theories focused on one intelligence, Gardner concluded that people learn and think in multiple ways, therefore possessing multiple intelligence (MI) (Blythe & Gardner, 1990; Brualdi, 1996; Lazear, 1991, 1992). Gardner believed strongly that children's assessments accurately reflected the strengths and weaknesses they possessed. Gardner believed that MI were the basis for the use of alternative assessments within the schools, and the assessments should be tailored to the varying learning styles of the children.

Gardner's (1993) Theory of Multiple Intelligences was used as the theoretical framework of this study. The theory for this research study supported the reality that there were many gifted students who were overlooked for gifted programs because their gifts and talents did not reflect what was considered the norm (Lichtenwalter, 2010). The gifted selection criteria utilized

a multifaceted array of intelligences, which qualified many students for potential placement into gifted programs. The theory which influenced this research study was Gardner's MI. Gardner's theory viewed intelligence as a multifaceted entity, as opposed to one, general ability. Gardner believed that there were nine intelligences: (a) spatial, (b) logical-mathematical, (c) bodily kinesthetic, (d) naturalistic, (e) linguistic, (f) musical, (g) interpersonal, (h) intrapersonal, (i) existential. He often included moral intelligence (Brualdi, 1996; Dixon & McPhee, 2001; Gardner, 1983; Gardner 2006).

Gardner (1999 a, b) believed that all human beings have MI; although each person's intellectual make-up was different, and defined the individual. Each student must understand how he or she was intelligent. Gardner concluded that learning was a process which was of a psychological and social nature. Through careful nurturing, students were able to understand their intelligences and value their strengths. When left unattended, those intelligences weakened (Gardner, 1999 a, 1999 b; Gardner, 2006).

The review of the literature substantiated that the components of Gardner's Multiple Intelligence Theory served as justification for identification of and differentiation for potentially gifted students. The thought that educators considered MI when deciding whether or not a child was gifted and determining the most suitable technique for working with these children was supported by this theory (Fasko, 2001; Gardner, 1999). Gardner (1983) believed that all students possessed learning intelligences, and their learning was differentiated to accommodate these intelligences.

People who possessed Verbal-Linguistic Intelligence expressed themselves with exceptional verbal skills. They usually articulated well either rhetorically or poetically and were sensitive to language, both written, and spoken. Those who possessed Mathematical-Logical

Intelligence displayed exceptional abilities in logical and numerical patterns. They quickly grasped abstract concepts, and engaged in scientific investigations. Those students also had the ability to think logically, and exercised deductive reasoning. Musical Intelligence encompassed the ability to engage in rhythmic tasks, compose musical patterns and display exceptional intonation abilities. This intelligence was nearly synonymous to linguistic intelligence (Gardner & Hatch, 1989).

Visual-Spatial Intelligence encompassed the ability to visualize images realistically and abstractly. Bodily-Kinesthetic Intelligence related to using the body to solve problems and coordinate movements through the mind because Gardner (1983) believed that the mind and the body worked together. People who possessed Interpersonal Intelligence were particularly cognizant of other people's intentions, motivations and desires. They possessed the ability to work well with others. Those who possessed Intrapersonal Intelligence were aware of their own feelings, fears, beliefs and values. Those people were able to regulate their own lives through self-knowledge. A strong sense of Naturalistic Intelligence meant that objects in nature were of utmost importance to an individual. Their ability to recognize and categorize animals and plants was extraordinary (Gardner & Hatch, 1989).

Moral Intelligence, according to Gardner (1983) was relative to one's ability to understand the concept of distinguishing right from wrong. It also encompassed one's ability to behave ethically correct. The concept of morality includes personality, character, will and individuality (Gardner, 1999a).

Learning, according to Vygotsky (1978, 1986, 1987) encompassed the interaction between people and the culture in which they lived. Interaction was a critical element of his Social Cultural Theory. He also believed that language was equally as essential to a child's

cognitive development. In essence, a socially enriching environment fostered the development of critical thinking skills and collaborative learning all of which supported higher levels of intelligence. Vygotsky (1978) stated:

> Every function in the child's cultural development appears twice: first, on the social level and later, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory and to the formation of concepts. All the higher functions originate as actual correlations between individuals. (Vygotsky, 1978, p. 57)

Psychologist, Louis Thurstone (1924/1973) created a similar theory of intelligence known as Primary Mental Abilities. He believed that intelligence should be viewed more specifically, and that the (IQ) score was effective in determining verbal academic achievement rather than determining the success of less verbal and less academic achievement (Thurstone,1973). The seven "Primary Mental Abilities" included: (a) verbal comprehension, (b) spatial visualization, (c) reasoning, (d) perceptual speed, (e) numerical ability, (f) associative memory, and (g) word fluency (Thurstone, 1938, Thurstone, 1947; Thurstone, 1973; Eby & Smutry, 1990). Both Gardner and Thurstone shared similar beliefs that intelligence should be viewed as multifaceted (Gardner, 1983, 1993, 1999a, 1999b, 2006; Thurstone 1924/1973, 1938, 1947). Vygotsky and Thurstone agreed that verbal comprehension was essential to mental development and was richly enhanced through socially rich environments (Thurstone, 1983, 1947; Vygotsky, 1978, 1986, 1987). The identification of the many areas of intelligence enhanced the identification procedures, and selection criteria. This belief directly or indirectly resulted in more gifted Non-White students being placed in gifted education programs.

Related Literature

History of Gifted Education

Recognizing people who excelled through performance had occurred world-wide and continuously throughout history. The evolution of gifted education was documented to have existed as far back as 380BC. It was during this time that free academies were established in Europe for boys and girls based on their intelligence and physical ability. These academies were established to encourage youngsters to achieve their maximum learning potential (Heller, 2000; Stewart, 1999; Wright, 2008).

The early Spartans valued people with superb military skills. The Athenians considered academics and physical adeptness to be of value. In Athens, the upper class males attended private educational institutions as they were favored to lead the Roman society (Colangelo & Davis, 2003; Gallagher & Weiss, 1979). Child prodigies were nurtured in their exceptional abilities and were often encouraged to demonstrate their exceptional abilities publicly. During the European Renaissance, all gifted intellectuals, artists, writers and architects were held in high esteem and rewarded for their abilities (Colangelo & Davis, 2003, Job, 2012).

Giftedness has always been recognized throughout history and the relevance of giftedness has always been associated with what was important in the specific era of history (Colangelo & Davis, 2003; Gallagher & Weiss, 1979). Once the concept of student differentiation emerged, the necessity to define and measure giftedness evolved. The process of differentiation addressed the needs of all students with varying abilities within the same classroom (Hall, 2002; Lawrence-Brown, 2004; Tomlinson, 2000; Tomlinson, & Kalbfleisch, 1998).

Giftedness has transformed throughout history, and encompassed many areas apart from the academic arena. GT programs were designed to provide gifted students with a challenging

curriculum, opportunities to excel in areas of giftedness and inclusion within cooperatively engaging learning environments with peers who possess similar forms of giftedness. The realization of the need to distinguish the education of gifted students from other students has existed since the 1950s after the launch of the Sputnik by the Soviet Union (National Association for Gifted Children, 2009).

Under the leadership of Supreme Court Chief Justice Earl Warren, the unanimous ruling was presented during the landmark case of Brown vs. the Topeka Board of Education on May 1954, which determined that segregation could no longer exist and that African Americans should have equal access to available educational programs, curriculum, facilities, transportation and resources (Brown v. Board, 1954; Kluger, 1974; Wolters, 1984). The tenacity of 13 concerned African American parents whose 20 children attended the segregated elementary schools of Topeka, Kansas proved to be worthwhile in this groundbreaking decision. Supreme Court Chief Justice Earl Warren's ruling ended state supported segregation and substantiated that all students should be afforded the opportunity to participate in gifted education programs if they meet the identified criteria and qualifications (No Child Left Behind Act, 2001).

During the 1960s, issues such as school integration, compensatory education and the Vietnam War took precedence. As the years progressed, schools and districts cut resources for gifted education due to budget restrictions and diminished program requirements mandated by the state (National Association for Gifted Children [NAGC], 2009). In 1965, the Elementary and Secondary Education Act (ESEA) were created in an effort to encourage and regenerate school improvement. In 1971, research on student needs became the focus of gifted programs. After carefully studying the needs for school improvement Sidney Marland, Commissioner of Education in 1972, reported the decline of gifted programming to Congress. As a result, the

creation of the Gifted and Talented Education Act (GTE) of the Public Law 95-561, Section 20 proposed recommendations for improvements in gifted education. Under GTE, gifted programs began to receive special education funding because of the association to special education (Clark & Zimmerman, 1984).

The 1980s brought about well-established GT guidelines, enhanced privileges for low socio-economic minority students, and the realization that measures for giftedness should rely less on intelligence assessments. Gifted education programs experienced financial cuts, and many programs were eliminated due to economic crises during the 1990s (VanTassel-Baska, 2010).

In 2001, the ESEA was reauthorized under the title of No Child Left Behind (NCLB), in which states were accountable for the assurance that the needs of all children were met. President George W. Bush signed the legislation, which officially mandated the NCLB become law in January 2002. This act would insure that low-performing students would be supported to achieve to their maximum level of achievement (Gentry, 2006; U.S. Department of Education, 2001).

Important annual assessments and specific performance indicators determined whether or not schools made their Adequate Yearly Progress (AYP) as mandated by the NCLB Act of 2001. AYP measurements focused on all students and included those with disabilities and limited English proficiency. Ethnic minorities and the economically disadvantaged were also included in these measurements. As a result, the needs of the high-performing students were not adequately being addressed while schools focused on meeting the needs of the low-performing students (Gentry, 2006; Mendoza, 2006). Many believed that improvements to gifted education

programs were no longer the primary focus, rather the focus was on the achievement of every child (Gallagher, 2004; Johnson, 2007).

Major Contributors to Gifted Education

Throughout history, many people significantly contributed to the field of gifted education. Leta Stetter Hollingworth (1886-1939) was an early pioneer utilizing multiple criteria for identifying gifted students. She was recognized as the first gifted counselor and gifted researcher who pioneered studies on emotional and social development of gifted children. Hollingworth's interest in gifted children peaked when, during an assessment session in November 1916, she witnessed a child score 180 on the Stanford-Binet Intelligence Test (Hollingworth, 1928, 1942, 1943). From that time forward, over a period of 23 years, Hollingworth searched the New York area for other children who could also score 180 or above. As a result of her search, Hollingworth identified 11 other children who possessed this caliber of intelligence; which lead her to determine that intelligence was inherited. She also concluded that educational experiences and the effect of the environment were greatly influential on a child's intelligence (Hollingworth, 1928, 1942, 1943; Klein, 2002).

Hollingworth published many books and studied children's ability ranges. She discovered that an IQ of 125-155 would allow one to function normally in a social setting. Those who possessed intellectual abilities above a 170 IQ were considered high risk for social and emotional problems because they surpassed their peers (Hollingworth, 1942; Passow, 1979).

Another contributor to the history of gifted education was Cattell (1905-1998). He designed and improved upon a series of intelligence assessments, many of which are used today. The assessments include the Children's Personality Questionnaire (CPQ), Clinical Analysis Questionnaire (CAQ), and non-verbal assessments as well. He also coined and defined the terms

fluid intellignce, which meant one's ability to learn new things despite past experiences and crystallized intelligence, which meant one's ability to solve problems as a result of prior experiences (Cattell, 1941, 1950; 1971; Horn & Cattell, 1967; Passow, 1979).

An American psychologist, Lewis Madison Terman (1877-1956) was recognized for his extensive study of gifted students and was considered by many as the father of gifted education. In 1916, Terman published the Stanford Revision of the Binet-Simon scale (Stanford Binet), which was effective in the identification and classification of children who were developmentally disabled. This assessment has been revised numerous times, and the fifth edition of this assessment is used today (Chapman, 1988, Jolly 2008; Seagoe, 1975; Sears, 1975). During World War I, 1.7 million soldiers were administered group intelligence assessments in an effort to classify the army recruits into categories of potential officer trainees or enlisted personnel. At the end of the war, Terman's focus diverted to the schools. Terman and his colleagues were instrumental in inspiring the utilization of intelligence testing in the schools (Terman, 1924a, 1924b, 1925, 1930, 1932).

The longitudinal study completed by Terman spanned over a 35 year period. From his longitudinal studies, Terman surmised that intellectual ability was innate and was obtained through heredity; however he also concluded that one's intellectual ability was significantly inspired by the environment. His studies dispelled most negative, stereotypical misconceptions of gifted children and revealed that gifted children were healthy and personable (Jolly, 2008; Seagoe, 1975; Terman, 1925, 1930). Terman's research goal was to focus his research on the extent to which gifted children and average children with normal intelligence differed. In Terman's own words, "If I am remembered very long after my death, it will probably be in

connection with my studies of gifted children, and the construction of mental tests" (Terman, 1930, p. 330).

Renzulli was the developer of the School-wide Enrichment Model (Renzulli, 1977; Renzulli & Reis, 1985). The model emerged from the Enrichment Triad Model, which envisioned schools as a place to enhance students' talents through challenging and enjoyable activities. The model allowed for school flexibility, program uniqueness through the utilization of available resources, faculty interests, and strengths (Passow, 1979; Renzuilli & Reis, 2002).

Francois Gagné was well-known for his Differentiated Model of Giftedness and Talent which was proposed in 1991 (Figure 2). He defined giftedness as an extraordinary natural ability and talent was defined as an ability that had been influenced through various catalysts to achieve maximum development (Gagné, 1985, 1995, 1999, 2000, 2003, 2005; Heller, 2000; Sternberg, 2004). Gagné believed:

> Giftedness designates the possession and use of outstanding natural abilities, called aptitudes, in at least one ability domain, to a degree that places an individual at least among the top 10% of age peers. Talent designates the outstanding mastery of systematically developed abilities, called competencies (knowledge, and skills), in at least one field of human activity to a degree that places an individual. (Gagne, 2003, p.1)

Gagné, 2009

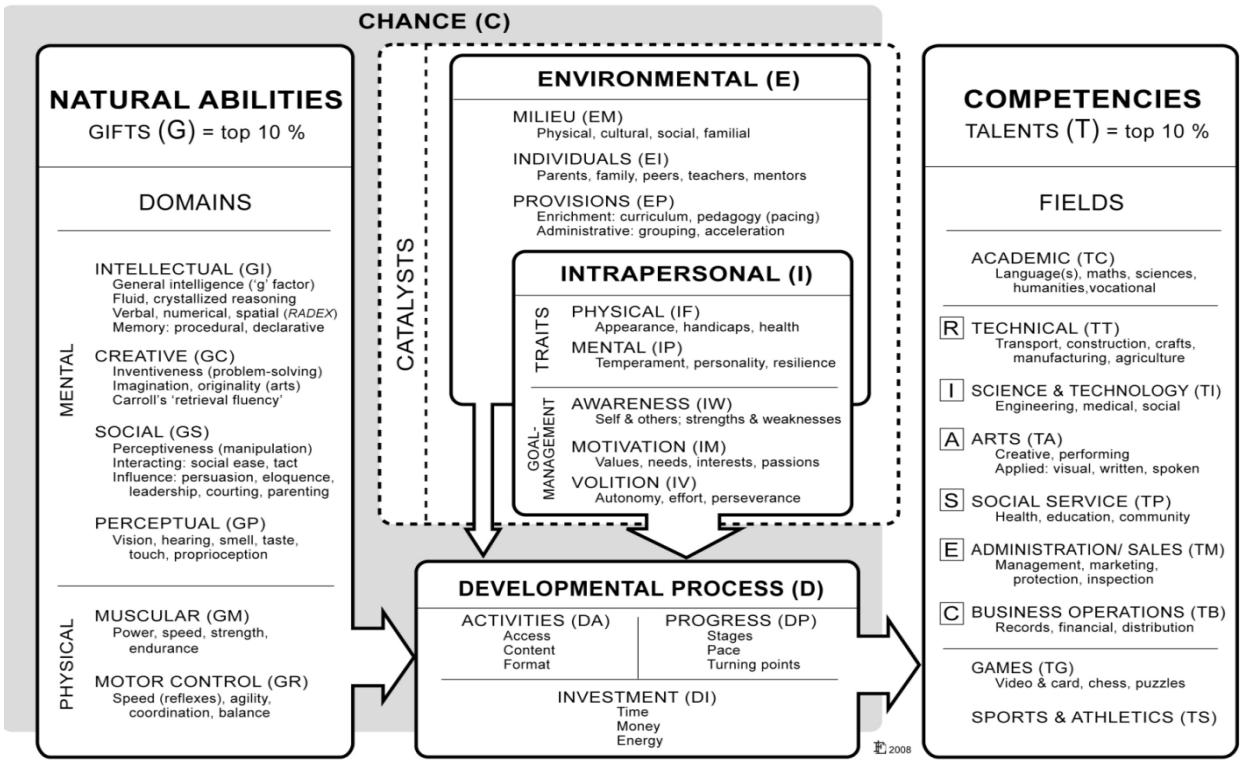

Figure 2. Differentiated Model of Giftedness, and Talent

Note. Differentiated Model of Giftedness, and Talent retrieved from Gagné, F. (2009). *Building Gifts into Talents: Brief Overview of the DMGT 2.0.* http://www.giftedconference2009.org and Gagné, F. (2010). Motivation within the DGMT 2.0 Framework. (permission granted: see Appendices E and F).

The catalysts which influenced the development of talents were interests, chance (the influence of genetics on giftedness), motivation (both intrinsic and extrinsic), maturity level and environmental factors (family, school, programs, services, people, and activities) (Gagné, 2003, Gagné, 2005). Gagné also believed that although one may be born gifted, the manifestation of the gifts would not be evidenced apart from appropriate nurturing. He believed that talents were evident at a young age and they diminished later in life due to the influence of peer perceptions about performance and what was age appropriate.

Characteristics of Giftedness

Giftedness is usually demonstrated by an unusual passion, oversensitivity or strength in one or more areas of creative thinking, general intellectual ability, academic ability, leadership, psychomotor ability, social and emotional traits, language development, visual and performing arts (Kennedy & Banks, 2011; Silverman, 1989).

Gifted students are often oversensitive with perfectionism, and often were very sensitive to the expectations they create for themselves and others. The ability to display sound judgment in decision making, exude self-confidence and organization skills were also qualities of many gifted students. They often displayed asynchronous development where their emotional, intellectual, and physical progression advanced at varying rates. Gifted students were creative thinkers, utilized an advanced vocabulary, possessed the ability to relate to their peers as well as adults and were challenged by activities which promoted the use of creativity. Those students were not intimidated by being different and were compelled to create and invent new things. Initiating a task was second nature for those children as was being very observant. Gifted students enjoyed hypothesizing and became excited about developing new ideas. Many gifted students were abstract thinkers who were stimulated through intellectual activity and they were very inquisitive. While some gifted students were skeptics and avid readers of a myriad of literature beyond their age.

Several children in various schools across the United States were not identified for GT programs because they had special educational needs that minimized their exceptional intellectual abilities or the exceptional intellectual abilities mask their special educational needs (Barton & Starnes, 1989; Baum, 1984a, 1984b, 1990; Brody & Mills, 1997; Kay, 2000; Silverman, 1989). These children were labeled as twice-exceptional because they possessed

learning disabilities, Asperger Syndrome or attention disorders in addition to displaying exceptional intellectual abilities as well. Some schools and school districts disqualified students from participating in GT programs because of their disabilities, consequently requiring students to relinquish specific services which had been tailored to meet their specific needs. Specific policies that were addressed within the Individuals with Disabilities Education Act (IDEA) and Section 504 of the Rehabilitation Act of 1973 required that no public agency could utilize any screening criteria which would deny anyone with a disability the program services they were eligible to receive unless the eligibility criteria was deemed necessary for participation in the specific activity or program. Also under this legislation, qualified disabled students must receive the same opportunities as the non-disabled to be assessed according to established gifted criteria and upon meeting the qualifications be offered acceptance into gifted programs (Rehabilitation Act of 1973, Public Law. 93–112, 87 Stat. 355).

Funding

School systems faced difficulties when identification procedures were created for gifted programs (Coleman, 2003). The concern was that the allocation of funding considered identification and programming. School financing evolved in 1642 when representatives of the Massachusetts colonies passed legislation which required specifically identified children to be educated in religious principles and law (Alexander & Salmon, 1995). In 1647 the law was enhanced further to include the concept of school funding. Cubberley (1906) wrote his philosophy on public education finances which stated that it was the duty of the state to provide the best education possible for all students by utilizing all available resources.

Policies regarding public school education financing procedures have changed very little since the 1920s, and 1930s when they were originally initiated. The primary goals of the NCLB

(NCLB, 2001) were the academic achievement of all students and the concerted efforts towards closing the achievement gap between the high and low performing students (National Association of Gifted Children, 2008). Funding for gifted education programs was inadequate and according to the NCLB (2001), the federal government allocated about two cents for every 100 dollars on expenditures for gifted education programs. Gifted education program coordinators were often required to make substantial cuts from their scarce budgets. The NCLB Act had not proven beneficial for gifted students because many elective programs were cut to focus on raising the test scores of low performing students (Ward, 2005).

The Jacob K. Javits Gifted and Talented Students Act (1999) and U.S. Department of Education (1993) provided limited federal funding for research initiatives for gifted education programs. The Jacob K. Javits Act of 1999 (Javits, 1999) provided financial support to the state and local educational agencies. Students who were disabled, economically disadvantaged, or had limited English proficiency were the focus of this initiative (Hala, 2008). Grant monies were prioritized and awarded. The first priority supported initiatives were designed to create and develop models for underrepresented populations in GT programs. The second priority supported GT service improvement efforts by the state and local contingencies on behalf of those students.

The Jacob K. Javits GT Students Education Act of 2001 further expanded its purpose. Grants and contracts were available between state, local, public and private constituents in an effort to enhance the needs of these GT programs (U.S. Department of Education, 2001). The funding was utilized for conducting research to identify creative techniques for educating GT students. The funding was also used for evaluations of programs and surveys that were essential tools for program development. It was essential that professional development for

administrators, teachers and counselors be administered to enhance the gifted education programs.

The creation and implementation of model programs and similar projects were encouraged for students who did not receive traditional GT services. Those programs included, but were not limited to mentorship programs, partnership programs with businesses and corporations, as well as peer tutoring programs. Increasing the availability of services and educational materials offered by state, and regional educational service centers was also a goal (U.S. Department of Education, 2001).

Information contained in the National Association for Gifted Children's (NAGC) State of the State Report 2010-2011 included facts regarding the gifted programs by state depending upon whether or not they reported data. The findings provided important information about the GT programs across the country. In the State of the State Report 2010-2011, 36 states submitted information regarding their GT education funding levels over a three year period. It was also reported that 10 states spent $0 in state funding, and 26 states spent amounts ranging from $5,000 to $300 million (NAGC, 2009). Without appropriate funding, gifted education programs and related materials would be limited in scope or nonexistent. Due to limited funding, schools were forced to choose between using individual assessments of children or using minimum group measures (Coleman, 2003). Insufficient funding also limited the number of students participating in the gifted programs, especially in low wealth school districts.

When considering all 50 states of the United States, eight states had gifted programs which were mandated and completely funded by the state (Gifted Education Policies, 2008). North Carolina is included among 22 states that had mandated gifted programs that were partially state funded. Four states had mandated gifted programs but no funding was provided

for these states. Furthermore, nine states had no mandated gifted programs but they had available funding. Washington, D.C., and seven other states did not have mandated gifted programs or available funding.

Funding for the AIG programs in all North Carolina Local Education Authorities was provided by the General Assembly (NCDPI, 2013). The allocated gifted program funds were included in the funding designated for general student allocation, and the number of identified gifted students had no effect on the total disbursement. The Local Education Authority (LEA) received about $1,163.07 per student. AIG funding for all LEA's in North Carolina during the 2012-2013 school year was $71,218,569. This funding was used to support the AIG students and related gifted programs.

Concerns

The term GT was not universally defined. Most definitions of giftedness combined GT components, although some definitions of giftedness considered talents exclusively. Many variations of definitions for GT existed, as did student identification procedures. Teacher preparation and student retention strategies also varied. GT definitions, as reported by the NAGC State of the State Report 2010-2011, indicated that multiple areas were included by most states. Because there was no single definition for giftedness, gifted programs had been critically examined (Besnoy, 2005).

The GT personnel of many states incorporated multiple criteria by using Gardner's (1993) MI for gifted identification purposes. Those areas that were represented in the definitions encompassed intellectual ability, performing/ visual arts, creativity and or specific areas. A few states included culturally or ethnically diverse demographics, low socioeconomic status, disabilities or geographical locations (rural/isolated). In most of the 41 states that reported GT

definitions, it was noted that the LEA was directed to use the state mandated definition (NACG, 2009).

King, Kozleski, and Landsdowne (2009) believed that through the adoption of culturally responsive definitions of giftedness, the inclusion of giftedness across gender, cultural, linguistic and socioeconomic groups would be acknowledged. They also believed that definitions should include messages that gifted students were a part of every background, and most life experiences. Under achievers as well as achievers, who were functioning at or above comparison groups were important additions to definitions of giftedness.

Non-White and students in low income families were often disregarded in regards to gifted services due to the belief that only a certain number of students could be identified as gifted. The gifted positions for gifted programs were not numbered. Many students qualified based upon traditional identification procedures, and others qualified based upon alternative procedures (Castellano, 2004; Ford et al., 2008; Klug, 2004). Nevertheless, all students should be considered regardless of the qualification measurement. Other concerns focused on the underlying attributes of Non-White under-representation in the GT identification process. Those fundamental concerns included grouping issues, curriculum and instruction issues and early intervention-preparation early childhood programs for students from Non-White, low-socioeconomic populations. It was important to consider modifications to the gifted curriculum in order to accommodate the needs of all gifted students (Treffinger, Whittig, Young, & Nassab, 2003).

Ford, Baytops, and Harmon (1997) researched the importance of recruiting retaining underrepresented populations in gifted education programs. They concluded that four recommendations addressed in their research if the underserved populations were to receive

equitable gifted education opportunities. First, they believed that screening instruments and identification procedures should be equitable. Second, it was essential that educators be provided opportunities to enhance themselves in the areas of multicultural, gifted and urban education. Third, it was important to provide careful consideration to matters which effected the achievement of minority students. Fourth, it was important to provide quality educational opportunities to all minority students (Ford et al., 1997, p. 202).

Explanation of Demographics

The focus groups of this study were the Non-White populations. African American, Native American and Hispanic populations have always been underrepresented in gifted programs (Ford et al., 2008). Studies suggested that special education classes were over-represented with African American, and Native American children. (Boutelle, 2008; Briggs, Reis, & Sullivan, 2008). Additionally, most gifted programs encompassed the middle to upper-class, Caucasian students who had been identified through the use of standardized tests.

Kohler and Lazarin, (2007) revealed various reasons for the disparity of the representation of these students into the GT programs which included: the lack of nominations by teachers, the grade in which students are nominated, the gifted criteria, and the quality of the gifted programs. Additionally, many people in the general population believed that testing issues were the major reasons for the underrepresentation of African American students into the GT programs; however, Ford, and Moore. (2004) believed that the primary hindrances to the recruitment and retention of these students were the lack of orientation of society and the learning institutions.

As the increase of ethnic and racial diversity permeated the school districts, educators focused their attention to standardized tests, which were definite opportunities for test biases and

test failure of Non-White students (Gould, 1995; Hilliard, 1992). Many educators adopted attitudes that were condescending toward Non-White students and reflected their doubts regarding their intellectual abilities. Teachers' beliefs were the basis for the biases, attitudes and actions. These beliefs affected how they performed their teaching duties (Deemer, 2004; DeWet & Gubbins, 2011). Some teachers had negative assumptions about the abilities of students from diverse ethnic, racial, linguistic, and socio-economic groups. They assumed that these students possessed low abilities and focused on the weaknesses of these students (Sagor & Cox, 2004). Prior racial experiences played an important role in teachers' perceptions as well (Ford, Moore, & Milner, 2005).

The concept of deficit thinking was traced to the days of segregation and the case of Plessy v. Fergusen, 163 U.S. 537 (1896). Menchaca (1997), who had done extensive research on the underrepresentation of Non-White populations in gifted programs, reported:

> Racial correlations in intelligence, it was contended, are most vividly explained by racial correlations in innate, genetically determined abilities. What emerged from these findings, regarding schooling, were curricular modifications ensuring that the "intellectually inferior" and the social order would best be served by providing these students concrete, low-level, segregated instruction commensurate with their alleged diminished intellectual abilities." (Menchaca, 1997, p. 38)

The Hispanic population in the state of North Carolina has increased since the 1990s (Pew Hispanic Center, 2005). These populations migrated to North Carolina to seek the availability of low-skilled jobs. The Hispanic populations which were settling in North Carolina were from Mexico, Puerto Rico, Cuba, Dominican Republic, and Central American countries. Approximately 8.4% of the Latino population in North Carolina were illegal immigrants and in

2010 the Hispanic population was 805,016 out of a total population of 9,561,558 (Pew Hispanic Center, 2010).

According to the U.S. Census Bureau (2008), the Native American population in North Carolina surpassed all other states along the East Coast. Eight Native American tribal nations were recognized in North Carolina: Cherokee, Lumbee, Haliwa-Saponi, Waccamaw Siouan, Coharie, Sappony, Mehaeein and the Occaneechi B of the Saponi Nation; however, California, Oklahoma, Arizona, Texas and New Mexico had larger Native American populations than North Carolina. It was also noted that about seven percent of Native American students attended schools under the auspices of the U.S. government Bureau of Indian Education, while the percentage who attended regular public schools was about 90 % (Alliance for Excellence in Education, 2008).

Disparity

Hispanic students were less than half as likely as their Caucasian counterparts to be placed in gifted programs or programs for high achieving students (Cohen, 1988; DeWet & Gubbins, 2011; Donovan & Cross, 2002). Efforts to improve the educational status of Hispanics were challenged because of shortages in educational resources, financial aid insufficiencies and a lack of exposure to rigorous courses (Kohler & Lazarin, 2007). Improvements were made in many states and school districts to their identification procedures and strides to encompass diverse populations of advanced students were improving; however, consistent efforts were needed to ensure that high-ability students received the appropriate services which met their needs (Cohen, 1988; NAGC, 2011; Renzulli, 1978).

Hispanic education has improved over the past 10 years. The data revealed that Hispanic educational attainment was substandard to non-Hispanics (Kohler & Lazarin, 2007). This

population of school-aged students was growing at phenomenal rates, and as the English language learners increased so did the educational gaps. There were many challenges for the Latino population which included insufficient financial assistance, unavailability of rigorous courses and a lack of educational resources. Hispanic and African American students were represented at disproportionate numbers in the GT programs. Latino children usually attended schools which served higher numbers of low-income students. These schools usually had fewer resources than most, and had high populations of minority students. In school districts where there was a large Latino population, there were significantly higher discrepancies in per student expenditures than low minority districts (Ford et al., 2008).

Many times, educators failed to realize that racial inequalities existed in the realm of education. It was believed that the initial step for educators and administrators was to acknowledge the inequalities and then be willing to investigate and seek to improve the identification process, evaluate necessary assessments and assess service delivery to gifted English learners (Castellano & Diaz, 2001; Stein, Hetzel, & Beck, 2012). In order to accomplish the improvements additional resources were often needed, such as: personnel funding; program changes; and professional development for teachers, counselors, and administrators. An analysis of collected data was the first step to identifying targeted areas of necessity, and a program of research-based best practices for gifted education could then be implemented.

Minority language students often possessed different learning styles which contributed to their underrepresentation in gifted programs (Cohen, 1988). Many Native American students experienced difficulty honoring the values of their home and community as opposed to the values of the school environment. An example of this would be the way students were often required to sit in structured positions while facing the teacher, but in the Native American culture

students sat in circles making decisions collaboratively together. Native American culture encouraged adults and children to be interdependent, collaborative decision makers, and to foster solidarity within groups. None of these values were identified on assessments for intelligence or achievement (Florey & Tofoya, 1988).

The language systems of Native Americans were comprised of nonverbal communication, soft speech patterns and verbal accounts with very little details. As a result of these correlations in language systems, Native Americans were often thought to have weaknesses in understanding oral language (Florey & Tofoya, 1988).

In public schools with high enrollments of Native American students, the number of Native American teachers was only about 16% (Alliance for Excellence in Education, 2008). Approximately one percent of the student population in 2007 was Native American, but this constituted about 0.6% of the total student population who took AP exams. In recent years, Native American students on average received higher scores than African American and Hispanic students on the Scholastic Aptitude Test in the areas of reading, writing and mathematics. Yet their scores fell below the national average (College Board, 2008).

Culturally and linguistically diverse (CLD) students were discriminated against in school settings and in gifted education programs (Ford & Frazier-Trotman, 2000). As documented by prior studies, the major reasons for the underrepresentation of African American, Native American and Hispanic students were poor performance on IQ tests, and low teacher expectations (Ford, 2004; Ford, Grantham, & Whiting, 2008). More valid and reliable instruments, processes and procedures must be considered in an effort to resolve the underrepresentation of African American, Native American and Hispanic students in gifted programs. Other acceptable options would be to utilize nonverbal and culturally sensitive

assessments, as well as more extensive definitions and theories of giftedness (Baldwin, 2005; Ford, 2005). Although these options would be crucial initiatives, a major obstacle permeating society, schools and school programs remains deficit orientation (Harry, 2008).

Deficit thinking promoted negative actions, stereotypical thoughts and prejudices which negatively affected policies and behaviors (Garcia & Guerra, 2004). Deficit thinking prevented individuals from envisioning, accepting and appreciating positivity, and valuing the strengths of people who were different. Deficit thinking allowed people to harbor negative perceptions and exhibit low expectations. They also projected feelings of superiority towards others who were different. Deficit thinking affected people's actions, which were propelled by their beliefs. People who have deficit thinking lack objectivity which leads to the implementation of biased assessments, inappropriate policies, a lack of minority referrals to gifted programs and affects CLD students (Garcia & Guerra, 2004).

Identification, and Selection Criteria

The Jacob Javits Gifted and Talented Students Education Act of 1988 was initiated in an effort to identify issues which prevented the identification of diverse populations. Strategies were created in an effort to improve identification procedures, and assessment policies (NAGC, 2008). The two major issues that affected gifted education were the absence of appropriate programs and identification procedures for children of culturally diverse backgrounds. When developing gifted identification criteria, it was important to consider the degree and extent of giftedness (Van Tassel-Baska, 2000). As a result, more attention focused on the academic needs of gifted culturally diverse children (Hala, 2008). Many individuals within the states had been challenged to create appropriate testing programs to measure and report student achievement (Kellow & Jones, 2005).

There was no mandate requiring the Local Education Agencies (LEA) within the same state to use the same gifted identification process according to the State of the State Report for 2010-2011 (NAGC, 2008). It was noted that 21 states had no specific guidelines imposed at the state level and 13 states had partial state requirements while the other part was left up to the LEAs. The majority of the states which reported their data agreed that their state provided uniform guidance on the identification process to the LEAs.

Thirty states had specific criteria, and GT identification methods as documented in the State of the State Report of 2010-2011 (NAGC, 2008). In seven of the states, the criteria, and methods of identification were decided by state and local constituents. Fifteen states reported that the criteria and the methods of identification were left up to the LEAs, while 13 states reported that there were no specific guidelines in place.

As revealed in the NAGC State of the State Report 2010-2011 (NACG, 2008), 28 states reported information on GT identification criteria (Figure 1). It was determined that 20 of the states were mandated to use multiple criteria to identify students and 18 states require at least two types of identification criteria. The specified identification criteria included: IQ scores, a variety of state mandated assessments, nominations by teachers and parents, and data on student achievement (NACG, 2008).

The use of standardized assessments to identify gifted students had been an issue of controversy for years. Throughout history, IQ scores had been used most often to determine a person's cognitive ability (Brown et al., 2005; Ford, 2005). Often times inconsistencies in cut-off scores existed that had been perceived as tracking students (Bernal, 2003). It was important to focus on the expansion of identification procedures by considering test scores in addition to various abilities and accomplishments (Baldwin, 2005; Renzulli, 2005). A focus on giftedness

through the identification of student strengths, their encouragement and the development of students' multicultural qualities was important (King et al., 2009; Stein et al., 2012).

In order to address the needs of CLD diverse students, adjustments in identification methods and the criteria were examined (King et al., 2009; Stein et al., 2012). It was important for educators to identify and utilize more assessments which were less culturally-biased. Educators must promote the identification of MI which had the potential to allow more students to be identified for gifted programs (Gardner, 1993). The use of assessments that were available in the students' native language was essential to their success (Stein et al., 2012; Webb, Gore, Amend, & DeVries, 2007). Nonverbal and visual-spatial assessments such as Raven's Progressive Matrices, and the Naglieri Nonverbal Ability Test were favorable alternatives as well. Identifying and assessing GT minority language students was intricate (Cohen, 1988). Not only were the students gifted and talented, but they represented different cultures, different socioeconomic statuses and spoke a native language other than English.

Giftedness existed within every ethnicity regardless of the socioeconomic status. The degree of giftedness varied greatly among certain ethnicities (Stein et al., 2012; Webb et al., 2007). Teachers were usually first to recognize a child's potential and initiate nominations, screening and identification of gifted students from underserved populations. It was important that they were adept in recognizing both traditional and non-traditional talents of students (Archambault et al., 1993; Donovan & Cross, 2002; McCoach, 2007). It was noted in a report by the NAGC (2004), that to substitute inadequate intelligence assessments for one assessment or one effort to gather data on a student who was being considered for placement into gifted programs yielded misleading and untruthful results. Utilizing the method of student identification based on high test scores impeded the opportunity for nontraditional students to be

identified and those who benefited from gifted education programs (Callahan, 2005; Stein et al., 2012).

Educators must consider nontraditional identification methods for students who were not well-versed in the English language (Stein et al., 2012). English language learners often focused more on English language proficiency; therefore, their gifted characteristics often went unnoticed. Stein believed that the missed identification occurred because most gifted identification measures were based solely on standardized assessments, which were administered only in English. The true potential of English language learners went undetected which often resulted in an underrepresentation of English language learners in the GT programs.

The belief existed that diverse methods were necessary to identify gifted students who were members of diverse populations. The consideration of multiple sources of data for the referral process was essential and included methods such as: recommendations from an expert team of educators, family members, peers and self-referrals of the students. Teachers must look beyond language proficiency, and create innovative educational opportunities for gifted language proficient students to showcase their giftedness in non-traditional ways. Educators must allow opportunities for students to create projects, oral reports, models, artwork and songs as alternative methods to display their unique abilities (Campbell, 2003; Stein et al., 2012).

Multiple criteria should be used when identifying GT students. Multiple criteria include academic achievement, motivation, interests and performance in many settings. Additionally, multiple sources of information should also be considered, such as: student grades test scores, recommendations of specialty area teachers and counselors. The students themselves should be included in the multiple sources of information. Many time periods within the identification

process should be considered, so that opportunities cannot be missed because of "one time" identification procedures (Campbell, 2003; Stein et al., 2012).

The Alabama gifted matrix exemplified the use of multiple criteria to assess intellect, aptitude, performance, and observations which were used to identify gifted students of all ethnicities, and genders (Romey, 2006). The Alabama gifted matrix supported the usefulness of multiple criteria in identifying culturally diverse students. A suggested list of over 60 assessment instruments used to identify GT students was published in the National Report on Identification in 1982 as reported by Davis & Rim (1998). It was also indicated within the report that a broader definition of giftedness was needed and that no limit should be established as to the number of students being identified as GT or those who were receiving services through the GT program.

Teachers were the first to recognize the potential of gifted students and were instrumental in advocating for them in the nomination, screening and identification process. It was imperative that teachers were provided examples of how traditional verbal, linguistic, and analytic intelligences appeared aside from typical standards. Through participation in the identification of descriptors for potential GT students, teachers gained more insight into the recognition of potential underserved populations (Callahan, 2005).

Early identification of a student's exceptional performance was essential for nurturing the child's gifts and talents. A challenging environment was conducive and essential for talent development (Donovan & Cross, 2002). Through the identification process, educators had the ability to allow students opportunities to maximize their potential through engaging learning activities (Callahan, 2005).

Problems with the Identification Process

Many reasons existed for the difficulties that accompanied the identification of gifted students, which included relative ideas of giftedness. One reason for the difficulties in gifted identification was the individual correlations of the learners. Another area of concern was that the underrepresented groups were not being considered for gifted programs due to inadequate assessments (Ford et al., 2008; VanTassel-Baska, 2000).

Accuracy in the identification of gifted students was imperative. No student should be overlooked or misidentified in the process (Baum, 1984 a, b; Baum & Olenchak, 2002). Problems with relying too frequently on standardized tests were prevalent. Other problems included issues with the actual policies and procedures which the local and state gifted programs followed (Campbell, 2003; Castellano, 2003). There were also concerns of inappropriate use of statistical formulas as a part of the identification procedures. When specific "cut off" scores were considered for identification and placement of students where all data was combined, the statistical methods were often questionable (Campbell, 2003; Frasier, 1997). When identification data was not accurately matched to the services that were provided for the students, problems arose. The ideal situation was to assess a variety of abilities, which were supported by a variety of services. This process insured the most ideal program matches (Campbell, 2003).

Gaps do exist between socioeconomic classes. If there was an inkling of potential present, readiness procedures were essential to prevent a decrease over time (Donovan & Cross, 2002). If early identification of GT students took place in the early years, the appropriate nurturing, and challenging would take place in an effort to enhance achievement and support performance. Early implementation of intervention strategies were important if the signs of exceptionality would continue to thrive (Callahan, 2005). Strategies should be developed for

continuous and on-going talent searches. Vigilance in seeking indictors for talent and gifts must be consistent.

The decision of whether or not to use group or individual testing was another issue in the identification of gifted students (Garcia & Pearson, 1994). When children were very young or exemplified special characteristics, assessments which were administered one-on-one yielded more accurate results. There were occasions when group assessments were administered. The assessor also played an important role in the testing process. An inexperienced assessor could be less sensitive and compassionate to the needs of the tester, which could infringe upon the validity of the testing process (NAGC, 2008). Unskilled assessors could compromise the potential for students to be accepted into gifted programs.

It is essential that the assessment conditions be as close as possible to the student's natural setting in order to obtain maximum results. When testing a student in unfamiliar surroundings, student performance may be compromised (AERA, APA, & NCME, 1999).

Communication between all stakeholders was essential in the identification process. Often times, communication between the GT educators and the other teachers (English Language Learners, Special Educators) was poor. As a result, student observations were hindered, and the possibility of becoming more acquainted with the students was reduced. Successful communication and collaboration between educators positively influenced identification opportunities (Gallagher & Coleman, 1994).

Locating specific policies that applied to the proper identification of gifted students from underrepresented populations was an issue of concern (Gallagher & Coleman, 1994). The gifted regulations of the states allowed districts to create their own identification procedures. Those districts were free to establish procedures which addressed the needs of their specific

populations. Other districts chose to use standard identification procedures, which did not address the needs of underrepresented populations. In those cases, the standards, and policies of identification served the majority rather than the minority.

The concept that teachers were inadequately prepared to teach GT students and multicultural education was supported by the research of Van Tassel-Baska and Stambaugh (2006). They discovered that the number of colleges, and universities providing courses in GT education was about three percent. Teachers were not receiving knowledge in multicultural curriculum, or internships which included multicultural experiences (Banks & Banks, 2006; Ford et al., 2008). Teachers were not prepared to acknowledge or understand cultural correlations as they related to behavior, learning styles or communication of diverse cultures, which affected correlations with students and student expectations.

The lack of teacher preparation could be detrimental to the identification, and assessment of GT, and linguistically diverse students. Untrained teachers were unable to teach, and/or challenge the gifted students once they had been placed in the programs (Ford et al., 2008). Knowledge of gifted policies and practices was essential for untrained teachers and could hinder the gifted identification process if training was not received.

Many gifted students were not served or identified who displayed exceptional abilities in creativity, artistic ability or leadership skills, even though gifted programs were mandated in many school districts (Ford, 1998; Roets, 1993). Most states recognize, and serve those students who displayed exceptional abilities in academic and intellectual giftedness only. The possibility existed that although a student may be identified as gifted in one state but not in another state was contingent upon the definition of giftedness that had been adopted by the state.

A research study examining 20 gifted programs conducted by Van Tassel-Baska (2006) regarding the identification of underrepresented minority students in GT programs, yielded results which revealed many concerns. The results indicated that the underrepresented students who were identified for the gifted programs were from a low socioeconomic status and received free and reduced lunch. On the elementary school level, it was determined that the assessment measures which were utilized exhibited language barriers which yielded immediate restrictions, and biases. Concerns regarding knowledge of identification procedures, and inconsistency in the gifted programs structure existed among the districts. The recommendations of the study were to provide attention to the GT program areas of identification, and other identified program areas which were not up to standard because the gifted programs existence would be jeopardized (Van Tassel-Baska, 2006).

Alternative Assessments

The purpose of alternative assessments was to focus on a student's performance rather than on test scores. Alternative assessments provided a more comprehensive view of a student's abilities (Job, 2012). Rubrics were often used as a method to objectively evaluate alternative assessments. Alternative assessments, often considered non-traditional, replaced traditional assessments, and student weaknesses were not magnified. Rather the focus was on student strengths. Alternative assessments were used for equity, but they are not intended to provide an unfair advantage. Alternative assessments served as an opportunity for equal opportunity. Students demonstrated the range of their competence without limitations (Roets, 1993).

Gifted selection committees should consider alternate gifted identification pathways and gateways, which were very important for the acceptance of students into the programs (Ford, 1996, 1998; Renzulli & Reis, 2003). Alternate pathways and gateways encompassed parent

nominations, peer nominations, self-nominations, and creativity assessments which are not usually automatically considered. Parent nominations were recommendations for the gifted programs which came directly from the child's parents. Peer nominations were GT recommendations which were initiated by the student's classmates or other peers.

Pathways and Gateways offered students alternative opportunities to meet the GT placement criteria for placement into the program. If students did not meet all of the criteria for one Pathway or Gateway, they have an alternative opportunity to qualify for the GT programs. One pathway or gateway allowed grades 3-12 students whose standardized testing and /or classroom grades did not fit into one set of criteria met the criteria for another pathway or gateway (NCDPI, 2013). The alternate pathway or gateway allowed for more flexibility not solely relying on numerical cut-off scores, rather acceptance was contingent upon a combination of indicators, professional judgment, screening data and assessment scores.

Multiple Assessment Combinations included but were not limited to: (a) aptitude, (b) achievement, (c) ability, and (d) creativity assessments. Other criteria such as parent, peer and self-nominations which were often considered as a part of the screening process when making decisions regarding placement into gifted programs (Ford, 1996, 1998; NCDPI, 2013, Renzulli & Reis, 2003). A student's parents and their peers could provide valuable information to support the nomination. Each of the school districts in this study is provided a list of alternative assessments which are identified as acceptable GT placement criteria (NCDPI, 2013). Unreliability and validity concerns were issues which applied to parent and peer nominations. The format and the questions that were addressed on the nomination documents used for reporting the screening information lacked specific cultural characteristics. The lack of cultural characteristics could make it difficult for parents and peers to recognize the student's gifted

qualities and strengths. As a result, the student's opportunity for consideration for the gifted programs could be denied.

Creativity assessments are those which allow students to demonstrate their creativity in a nontraditional manner for consideration into the GT programs (Ford, 1996, Ford, 1998). During this process, all previous school records; teacher, student, and parent interviews; and assessment data should be reviewed in an effort to make effective selections.

Educators should consider the use of special nominations during the gifted selection process (Renzulli & Reis, 2003). This process involved creating, and circulating a list of the students' names who had been nominated for consideration for the gifted programs. Teachers from the present and previous schools had the opportunity to support or reject the nomination based on their affiliation with the student. After reviewing the list, teachers may discover that there are students who should be considered whose names did not appear on the list. This process also served as a check and balance system to insure that all potential candidates were considered. This process also curtailed biases of those who may be under nominators or non-nominators.

Portfolios were useful tools for the documentation of a child's development (Callahan, 2005; Cody & Moore, 2010). Assigned tasks, and student selected tasks could be used to reveal a child's potential. Activities which fostered creativity and critical thinking, supported gifts and talents in areas of complex thinking and analysis processes. Portfolios were essential tools for long-term or short-term data collection measures. Portfolios depicted a students' advancement in learning over a specific timeframe. Portfolios may have been kept electronically or a number of other ways (Job, 2012).

If students were unable to successfully complete standardized verbal assessments, essays

were useful alternatives (Job, 2012). Students were able to showcase their thinking and comprehension skills in a more detailed manner through the use of essays. When students wrote the essays their thought processes, and ideas were captured through their written responses. Presentations and demonstrations were alternative assessments in which students actually performed skills. Through presentations, and demonstrations students showcased their retention of knowledge, self-confidence and other important skills as they creatively shared with others. Teachers had the ability to assess student learning, and comprehension through observations (Callahan, 2005; Cody & Moore, 2010).

Behavioral checklists or inventories were also used to identify GT minority language students (Cohen, 1988). Checklists were used to rate students by using specific characteristics. Other alternative assessment tools used to identify GT minority language students included interviews, autobiographies and case histories. As a part of the selection process, interviews were used as an assessment tool for planning instruction. Case studies revealed a wealth of knowledge about a student's abilities because information was collected from many sources which supported conclusive decision making (Renzulli & Smith, 1977).

Summary

This researcher examined literature which supported the context of the research study. The theoretical framework lent credence to the research and provided a basis for its foundation. The gap in literature regarding gifted alternative selection criteria (Pathways, Gateways, and Multiple Assessment Combinations), and its relevance to the placement rates of Non-White (African American, Native American, and Hispanic) populations must be examined. The question of why the alternative selection criteria does or does not have a correlation substantiates further research. The necessity to consider reasons for disparity, lack of funding, identification

selection criteria correlations and concerns with inconsistent definitions were considered by the author within this chapter.

An effort to identify problems which pertained to the gifted identification process was discussed. An effort to seek solutions to correct the problems was considered. Gifted students deserve the best efforts of all stakeholders toward correct identification and placement into gifted programs.

CHAPTER THREE: METHODOLOGY

The problem is that African American, Native American and Hispanic students are underrepresented in gifted and talented (GT) elementary school programs in many counties of North Carolina as indicated in the North Carolina Gifted and Talented Plans for 2010-2013 (NCDPI, 2013). According to Donovan and Cross (2002), it has been found that the criteria which are used to identify students for participation in gifted programs have an effect on the numbers and proportions of underrepresented populations. The purpose of this quantitative, correlational, ex post facto research study was to examine the relationship between the alternative gifted selection criteria utilized in six different southeastern counties in North Carolina and the placement of gifted African American, Native American and Hispanic students in elementary level gifted programs. In several North Carolina school districts there was an underrepresentation of ethnic minority students in GT elementary school programs. The duration of the AIG Plan developed by each school district covered the period from 2010-2013. The data retrieved for this research study covered the school year 2012-2013.

Coleangelo and Zaffrann (1979) as well as Job (2012) maintained that the academic potential of culturally diverse children was not recognized and that the use of standard IQ scores did not identify those children's abilities. From a review of the related literature there is only limited research in regard to the use of gifted alternative selection criteria and its effect on the placement rate of African American, Native American, and Hispanic students in gifted programs. This researcher was not able to find research studies about the presence of a correlation between the use of alternative selection criteria and the placement of ethnic minority students in gifted programs. The results of this study may inform educators about whether the use of alternative

GT selection criteria bear a correlation to the placement of African American, Native American, and Hispanic populations. It will further add to the body of research on this topic.

The information in Chapter Three describes the research design and its appropriateness for use in the research study. Also there is an explanation of the: (a) selected population sample, (b) instrumentation, (c) geographic location, (d) methodology for data collection, and (e) data analysis. In addition, there is a description of the receipt of appropriate confidentiality authorizations in regard to the collection of data from state and/or district constituents. A brief summary is provided to conclude this chapter.

Research Design

This was a correlational, quantitative, ex post facto research design whereby the researcher's focus was on alternative GT selection criteria and the relationship to the acceptance of African American, Native American**,** and Hispanic populations into gifted programs. The intent of this study was not to show cause and effect. The methodology and design selected for this research study were suitable because predetermined hypotheses were tested through statistical analysis of numerical data which determined whether there was a correlation between the alternative GT selection criteria and the placement of African American, Native American**,** and Hispanic populations. The information which was retrieved relative to this study focused on determining a correlation between variables (Gall, Gall, & Borg, 2007). Numerical data, more specifically student counts of students already accepted and participating in GT programs, were collected and analyzed to explain the correlation between the alternative gifted selection criteria and the placement of African American, Native American, and Hispanic students in the elementary gifted programs of six counties.

The use of correlation procedures have been shown to be effective in the collection of information on multiple variables which are related to one sample group (Gall et al., 2007). Correlation designs are useful in the study of problems in education. Their use allows the researcher to analyze whether there is an association between a variable and a pattern of behavior. The purpose of correlational research is to determine whether there is a correlation and to what degree it exists between two or more quantifiable variables.

Quantitative studies are utilized to identify phenomena which are quantifiable and represented statistically (Creswell & Plano-Clark, 2007; Gall et al., 2007). The quantitative study is driven by the prediction of a hypothesis (Santiago, 2009). This researcher used the Pearson Chi-Square to determine whether there was a relationship between the selection criteria and the placement of selected minority students. The nature of the variables (i.e., ordinal, continuous, nominal) determined the type of statistical tests allowable. The data used for this study was based on categories so they were nominal. The two variables involved in this study were ethnicity and placement criteria. Both variables were categorical because they could not be ordered on a continuum. Also, the Pearson Chi-Square test was used to test the null hypothesis to determine whether the variables were independent. Probability values or *p* values are often associated with Pearson Chi-Square statistics (Lehman, O'Rourke, Hatcher, & Stepanski, 2005).

Research Questions

The following research question guided this study:

RQ1: Is there a significant relationship between the alternative gifted selection criteria (Pathways, Gateways, and Multiple Assessment Combinations) used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American**, **Native American**, and **Hispanic** students into gifted and talented programs?

Research Hypotheses

The research hypotheses and null hypotheses that were tested in this study are:

H_1: There is a significant relationship between the alternative gifted selection criteria, specifically *Pathways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American** students into GT programs.

H_2: There is a significant relationship between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American** students into GT talented programs.

H_3: There is a significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combinations*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American** students into GT programs.

H_4: There is a significant relationship between the alternative gifted selection criteria, specifically *Pathways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs.

H_5: There is a significant relationship correlation between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs.

H_6: There is a significant relationship between the alternative gifted selection criteria,

specifically *Multiple Assessment Combinations*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs.

H_7: There is a significant relationship between the alternative gifted selection criteria, specifically *Pathways*, used for the identification of students in selected North Carolina counties, and the placement of traditionally underrepresented **Hispanic** students into GT programs.

H_8: There is a significant relationship between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Hispanic** students into GT programs.

H_9: There is a significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combina*tions, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Hispanic** students into GT programs.

The null hypotheses are as follows:

H_{01}: There is no significant relationship between the alternative gifted selection criteria, specifically *Pathways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American** students into GT programs.

H_{02}: There is no significant relationship between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American** students into GT talented programs.

H_{03}: There is no significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combinations*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American** students into GT programs.

H_{04}: There is no significant relationship between the alternative gifted selection criteria, specifically *Pathways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs.

H_{05}: There is no significant relationship correlation between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs.

H_{06}: There is no significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combinations*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs.

H_{07}: There is no significant relationship between the alternative gifted selection criteria, specifically *Pathways*, used for the identification of students in selected North Carolina counties, and the placement of traditionally underrepresented **Hispanic** students into GT programs.

H_{08}: There is no significant relationship between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Hispanic** students into GT programs.

H_{09}: There is no significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combina*tions, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Hispanic** students into GT programs.

In the following section of this chapter, the researcher has provided information about how this study was conducted and the resources used to conduct the study. Those resources include descriptions of the: (a) subjects, (b) setting, (c) instrumentation, (d) procedures, and (e) data analysis.

Identified Populations

Stratified random sampling, specifically**,** purposive sampling was used in this study because a specific purpose was identified. The researcher included specific populations which were examined in this study: (a) Caucasian, (b) African American, (c) Native American, and (d) Hispanic. All of the ethnicities studied lived within each selected school district. The school districts in this study were purposely selected as a representative sample of those school districts in North Carolina where traditional and alternative criteria were used to place students in elementary GT programs. The six school districts which were selected were representative of the selection criteria considered by many of the counties in North Carolina and served as a representative sample of each region of North Carolina (e.g., north, south, east, and west). These school districts provided an adequate, representative sample of the populations needed for the study.

Data were collected from all of the elementary schools within the six participating counties/districts for use in this study. This researcher selected the elementary school level to be the focus of this study because, in this researcher's experience, the students in the gifted

programs continued to exist as learning groups in elementary school level in contrast to middle and high school levels. Homogeneous classroom groupings were prevalent and all students with varying ability levels coexisted within the same classroom. The gifted teacher usually worked with students in small groups with one or two grade levels combined. Either students were pulled out from the regular classroom or they were monitored within the regular classroom setting.

Setting

The setting for this research study included six counties throughout the state of North Carolina. North Carolina, with its beautiful varied landforms and pleasant year round climate, was the 12th state to enter the Union on November 21, 1789. North Carolina is located along the Eastern Seaboard nestled between the states of Virginia to the north, and South Carolina and Georgia to the south. To the east of North Carolina is the Atlantic Ocean and the state of Tennessee is on the western border. The total population of North Carolina is 9,752,073 (Education Bug, 2012; North Carolina Department of Public Instruction (NCDPI), 2013; School Digger, 2012; U.S. Census Bureau, 2010) ethic population breakdown is: (a) 71.9% Caucasian, (b) 22% African American, (c) 8.7% Hispanic or Latino, (d) 2.5% Asian, and (e) 1.5% Native American. Approximately 7.4% of the population is considered foreign born and 10.6% of the population ages five and older speaks a language other than English within the home. Approximately 196.1 people lived per square mile, and the total land area is 48,617.91 square miles (Education Bug, 2012; NCDPI, 2013; School Digger, 2012; U.S. Census Bureau, 2010).

There are 212 school districts in North Carolina, as well as 100 county administrative units and 15 city administrative units (NCDPI, 2013). The total number of students enrolled North Carolina district schools in Grades PreK-12 is 1,360,209 (696,890 males and 663,319

females). There are 1,834 elementary schools (Grades PreK-8), that comprise 72.6% of the schools in the state and 413 secondary schools (Grades 9-12) that comprise 16.3% schools in the state. The ethnic distribution for the schools state-wide are: (a) 51.9% Caucasian, (b) 26.1% African American, (c) 14.3% Hispanic, (d) 2.6% Asian, (e) 1.4% Native American, (f) 0.1% Pacific Islander, and (g) 3.6% Other (School Digger, 2012).

The county pseudonyms were: County A, County B, County C, County D, County E, and County F. All of the schools in these counties were accredited, and they followed basic gifted criteria as mandated by the state (see Table 1).

Table 1: Number of Schools in Selected Counties of North Carolina 2013

County/ District	# Elementary Schools	# Middle Schools	# High Schools	Total
County A	7	4	2	13
County B	72	20	14	106
County C	9	3	3	15
County D	8	2	2	12
County E	18	5	6	29
County F	8	3	3	14

Note. The Number of Schools in Selected Counties of North Carolina 2013 was created from data retrieved from Schooldigger.com 2013.

The state allowed each school district to enhance the gifted criteria according to their specific populations. In the six counties in North Carolina which were the focus of this research study, the staff utilized traditional and alternative criteria to place students into the GT programs (NCDPI, 2013). In some county school districts the staff implemented a multiple criteria model,

while others considered IQ scores to be most effective in the identification process. Other staff in the districts utilized achievement data and state approved assessments. Additionally, nominations from parents, teachers, and students were used. A combination of criteria was utilized in many of the county school districts (see Figure 1).

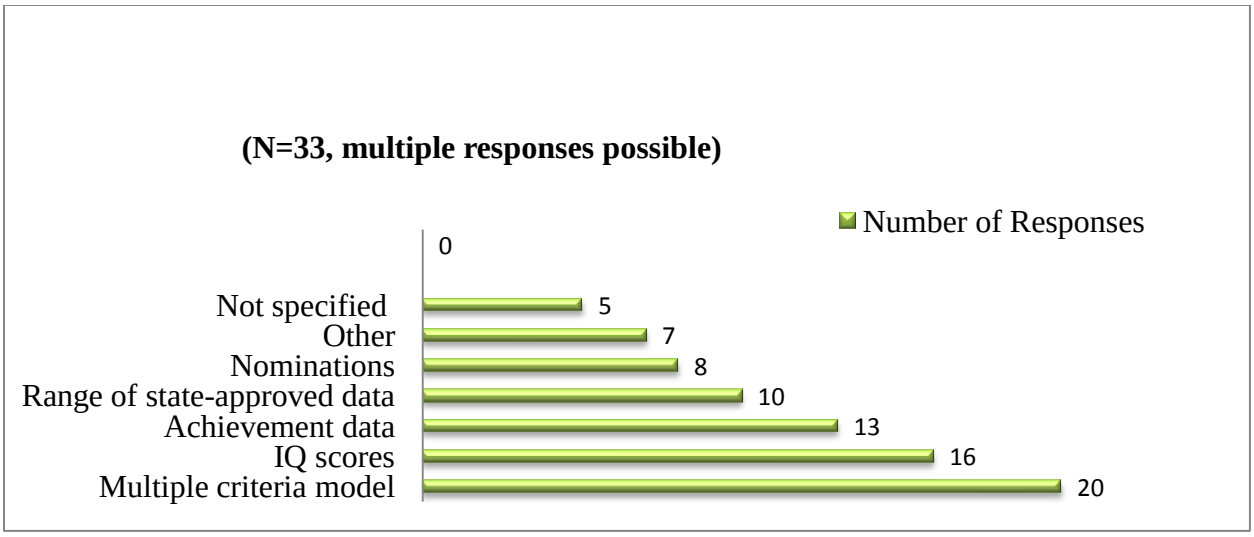

Figure 1. Criteria/methods required for identification. *Note.* National Association for Gifted Children. (2010-2011). *State of the States Report in Gifted Education.*

According to the statistics reported in 2010 (Education Bug, 2012; School Digger, 2012; NCDPI, 2013), specific demographic data regarding the the populations of Counties A, B, C, D, E and F were reported. Additional data such as ethnic distribution, population per square mile, language spoken in the home and specific elementary school data are reported in Table 2.

Instruments

Demographic statistical data were provided for the African American, Native American, and Hispanic students who were placed in the GT programs during a review of the documents of public records for the state and district. In addition, the local three year AIG Plans were reviewed for each district. Graphs and charts were prepared based on the data that this researcher obtained from the state and/or school districts. The spreadsheets of student counts

were collected and analyzed based on the North Carolina State and local school district level reports. These statistical data were used to determine whether there was a relationship between the alternative GT criteria and the placement of selected ethnic minority populations (e.g., African American, Native American, and Hispanic) into the gifted programs. The appropriate data for this study were obtained from the North Carolina State Department of Education and District Board of Education for the six school districts. Data and pertinent information were systematically collected and recorded from: (a) primarily, district school boards, and (b) secondarily, the State Department of Education. The sources for the data were Counties/School Districts A, B, C, D, E, F and NCDPI.

A review of the alternative gifted placement criteria data were analyzed to determine whether any of the criteria (e.g., Pathways, Gateways, and Multiple Assessments Combinations**)** were correlated to the placement of underrepresented ethnic minority populations (e.g., African American, Native American, and Hispanic). An assessment of data was made and reported.

The compiled data from the spreadsheets were organized for entry into a computerized statistical analysis program (Microsoft Office, 2007) to generate appropriate statistical models. Since statistical data were retrieved directly from the Local School Districts and NCDPI AIG offices, all accountability reports were deemed as reliable sources. The data were considered valid and reliable on the district and state levels. The gifted criteria varied as the staff in each county school district enhanced the criteria to meet their specific populations. The alternative selection criteria were considered to determine whether there was a relationship to the placement of selected ethnic minority students.

Table 2. Demographic Data for Each of the Six Counties

County	African American	Native American	Hispanic	Caucasian	Foreign Born	Language other than English	Elem. Schools	Middle Schools	High School	Free Lunch	Reduced Lunch
A	35.0%	60.5%	7.3%	2.7%	4.6%	6%	7	4	2	85%	7%
B	37.4%	1.7%	10.2%	53.7%	5.9%	11%	53	16	14	6.3%	4.5%
C	38.8%	4.9%	13.4%	53%	14.0%	19%	9	3	3	79.8%	combined
D	34.2%	9.7%	12.4%	50.4%	5.6%	12%	8	2	2	63.8%	9.1%
E	38.4%	0.9%	6.5%	58%	4.8%	7.4%	16	5	8	69.6%	combined
F	20.3%	1.3%	19.4%	75.4%	11.5%	17.7%	8	3	3	64.4%	6.8%

Note. All statistics were retrieved from: Education Bug, 2012; School Digger, 2012; NCDPI, 2013.

The process of the selection of instruments or screening and identifying gifted students was focused primarily on validity, reliability, and cultural sensitivity (Ford et al., 1997). In addition, school staff should focus on subgroup norms in the assessment process as comparisons are made. Efforts were intentionally made to carefully identify the strengths and possible potential of minority students through comprehensive and holistic profiles as a part of the assessment process.

Procedures

The first step in the process was to contact the appropriate personnel in order to request permission to conduct this research study; letters were received, which granted permission and approval for the release of relevant statistical data. Specific Local AIG Plans were reviewed on the NCSTDE website (2010-2013), as well as the six identified school district offices where the demographic statistical data originated. A total of 35 letters were sent to various school districts to request permission to conduct the study, and seven agreed to participate (see Appendix A). Six permission approval letters were received by the researcher (see Appendix B for sample permission approval letter), prior to the Institutional Review Board (IRB) permission, and one responded favorably after the IRB approval had been granted. However, the researcher decided to move forward with the first six respondents. According to the U.S. Department of Education (2007), Federal law allows the staff of schools and school districts to release data for proposed formal, educational research without prior consent of parents.

Next, the researcher submitted the appropriate packet of materials to obtain approval from the IRB at Liberty University to conduct this research study. Once IRB approval was granted (see Appendix C), the researcher began the research process. The researcher made contact with the local school district staff to inform them that IRB approval had been granted (see Appendix D), and the time had come to collect the student counts for the AIG programs of each school in the: (a) district,

(b) Local AIG Plans, and (c) school/district demographic data . The gifted education criteria data (i.e., non-traditional/alternative) were received from each of the six school districts, reviewed, and analyzed for a more global picture of the necessity of this research study. After informing each school district that permission to proceed with the research study had been granted, the researcher began the collection of data. The collection of data included written records and spreadsheets.

The researcher insured that all names were represented by pseudonyms and the appropriate permission was granted at all levels during the process (U.S. Department of Education, 2007). Tape recorded and handwritten notes were taken, when necessary, as relevant information was disclosed. Also, supportive documents were collected as they related to this research study. An examination of the alternative gifted selection criteria was conducted, and this researcher examined the findings extensively in order to determine whether there was a relationship between the alternative gifted criteria and the placement of underrepresented ethnic minority populations.

All communication was in the form of: (a) email messaging, (b) telephonic communication, (c) standard mail system, and/or (d) on-site office visits. All contacts were prearranged to insure availability of resource personnel. The researcher traveled with the use of personal vehicles. All of the collected data were appropriately stored in a locked file cabinet, on the password protected computer, or on a flash drive. All information received was treated as confidential.

Finally, a request for permission to use the Differentiated Model of Giftedness and Talent by Gagné within this dissertation was submitted. The request was made through an on-line application and the email response that was received has granted the researcher full permission to use the chart in this research study (see Appendices E & F).

Data Analysis

The North Carolina State Department of Education and the local school district Departments of Education were the resources for the acquisition of statistical data. The statistical data were received through: (a) internet resources, (b) face-to-face contact, and (c) printed materials. Once all documents and statistical data were received, the researcher sorted and tabulated the findings. The various alternative gifted selection criteria were researched, reviewed, and analyzed.

Pearson Chi-Square statistics were used to analyze the data for this research study because the magnitude of the relationship between the alternative acceptance criteria and the placement of African American, Native American, and Hispanic students into gifted programs was the focus (Gall et al., 2007; Jacoby, 1997; Lehman, O'Rourke, Hatcher, & Stepanski, 2005). The statistical procedure, Pearson Chi-Square, was conducted to test the strength of an association between the alternative gifted criteria and the placement of underrepresented ethnic minority students in the program. A comparison of counts was considered rather than means. The Pearson Chi-Square test was utilized in order to decide whether to accept or reject the null hypotheses when frequency data on a nominal scale were involved.

The nature of the variables (i.e., ordinal, continuous, nominal) determined the type of statistical tests allowable. The data used for this study were based on categories (alternative selection criteria and ethnic minority populations), so they were nominal variables. Also, the Pearson Chi-Square test was used to test the null hypothesis to determine if the variables were independent. A Pearson Chi-Square test of association was an appropriate technique to use to explore relationships in these data (Gall et al., 2007; Lehman et al., 2005; Norusis, 2008). These analyses were performed with the use of Microsoft Office Excel 2007. The sets of alternative gifted selection criteria from each of the six counties were reviewed and analyzed. The results of the

analysis were reported within the study and supported whether there was a correlation between the gifted selection criteria and the placement of Native American, African American, and Hispanic students in the program. The data obtained through this study provided new information for those associated with gifted education and added to the body of research on GT selection criteria.

Summary

The purpose of this quantitative, correlational, ex post facto research study was to determine whether there was a relationship between the alternative selection criteria utilized in six different counties in North Carolina and the placement of gifted African American, Native American, and Hispanic students in elementary gifted programs. The researcher wanted to determine the strength of the possible correlation and whether the administration of the alternative criteria made a difference in those populations which qualified for the elementary school GT programs.

To ascertain whether a relationship existed between the alternative gifted and the placement of selected ethnic minority populations, data were collected from the six school districts and State Department of Education. A thorough examination of the data revealed answers to the research questions which had previously been identified. Careful precautionary procedures were adhered to in an effort to observe confidentiality guidelines.

CHAPTER FOUR: FINDINGS

The results from the analysis of the relationship between gifted education selection criteria and student placement into gifted education programs are presented in this chapter. The chapter is divided into three sections. First, a brief overview of the process used to collect and compile the data is provided. Next, results from the data analysis are presented. The chapter concludes with a summary of research findings. Each research question is answered in a discussion through the use of statistics, graphs, and charts.

Process Overview

The purpose of this quantitative, correlational ex post facto research study was to determine whether a correlation exists between the alternative gifted selection criteria, specifically Pathways, Gateways, and Multiple Assessment Combinations, and the placement of African American, Native American, and Hispanic students into the elementary gifted programs. Therefore, is there a relationship between ethnicity and placement into gifted education by use of a particular placement method (Pathways, Gateways, and Multiple Assessment Combinations)? The researcher tested three different hypotheses using a single chi-square test. Each hypothesis covers the gifted and talented selection criteria (Pathways, Gateways, and Multiple Assessment Combinations), therefore, three hypotheses were tested for each ethnicity. Other things equal, if the null hypothese are true, it was expected that ethnicity would be unrelated to placement method and that the distribution of students across the placement methods used would be the same. Each question was answered in the discussion and through statistics, graphs, and charts.

The study was designed to answer the following research question.

RQ_1: Is there a significant relationship between the alternative gifted selection criteria (Pathways, Gateways, and Multiple Assessment Combinations) used for the identification of students in

selected North Carolina counties and the placement of traditionally underrepresented **African American, Native American** and **Hispanic** students into gifted and talented programs?

The following corresponding hypotheses were tested in this study.

H_1: There is a significant relationship between the alternative gifted selection criteria, specifically *Pathways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American** students into GT programs.

H_2: There is a significant relationship between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American** students into GT talented programs.

H_3: There is a significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combinations*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American** students into GT programs.

H_4: There is a significant relationship between the alternative gifted selection criteria, specifically *Pathways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs.

H_5: There is a significant relationship correlation between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs.

H_6: There is a significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combinations*, used for the identification of students in selected North

Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs.

H_7: There is a significant relationship between the alternative gifted selection criteria, specifically *Pathways*, used for the identification of students in selected North Carolina counties, and the placement of traditionally underrepresented **Hispanic** students into GT programs.

H_8: There is a significant relationship between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Hispanic** students into GT programs.

H_9: There is a significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combina*tions, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Hispanic** students into GT programs.

The staff of each local school district in North Carolina was required to create a Local AIG Plan for the 2010-2013 school years (North Carolina Department of Public Instruction, 2013) The Academically and Intellectually Gifted (AIG) Plan was based on standards established in July 2009 which specified elements of an effective program. The staff of each school district critically self-assessed their AIG program and made recommendations, the data collected during this process were essential to the development of the Local AIG Plan (NCDPI, 2013). One component common to all Local AIG Plans was the service delivery identification criteria which addressed how the students would be identified for participation in the gifted programs—whether it was through Pathways, Gateways, or Multiple Assessment Combinations. The elements of each criterion were outlined within the Local AIG Plans in detail. Each Local AIG Plan included the rational for the selection of the specific criterion which addressed the needs of the traditionally underrepresented populations of

the gifted as well as the student demographics of the local district. The Local AIG Plan was the initial resource that the researcher considered as it provided background information in regard to the specific AIG Gifted Criteria for placement into the programs used by each school district considered for this study.

Data Findings

The AIG program assessors for County A utilized Gateways as the criteria for placement into the AIG program. A total of 283 students were placed into the elementary school AIG program for the 2012-2013 school year in Grades 3-5. The total numbers of students placed by grade level were: (a) Grade 3, 73; (b) Grade 4, 97; and (c) Grade 5, 113. The total number of students placed by ethnicity for Grade 3 were: (a) Caucasian 30; (b) African American, 30; (c) Hispanic, 7; and Native American, 3. The total numbers of students placed by ethnicity for Grade 4 were: (a) Caucasian, 50; (b) African American, 31; (c) Hispanic, 7; and Native American, 3. The total numbers of students placed by ethnicity for Grade 5 were: (a) Caucasian, 5; (b) African American, 27; (c) Hispanic, 15; and (d) Native American, 1. (see Figure 3).

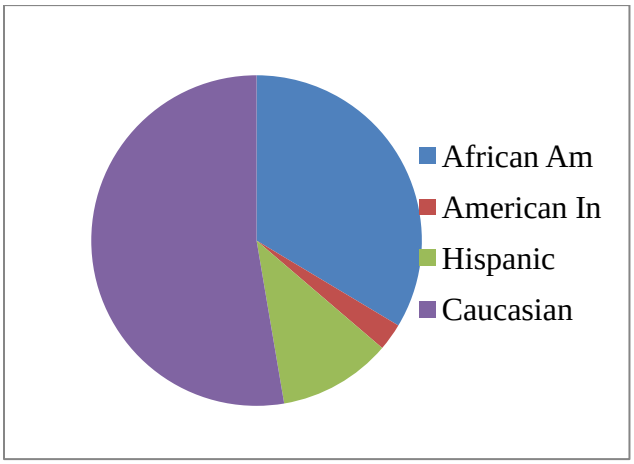

Figure 3. AIG population of County A

N=Total numbers of ethnic populations placed in AIG programs

The AIG program assessors for County B utilized Pathways as the criteria for placement in the AIG program. A total of 1,236 students were placed in the elementary school AIG program for the 2012-2013 school year in Grades 3-5. The total numbers of students placed by grade level were: (a) Grade 3, 324 students; (b) Grade 4, 434 students; and (c) Grade 5, 478 students. The total numbers of students placed, according to ethnicity, for Grade 3 were: (a) Caucasian, 204; (b) African American, 73; (c) Native American, 6; and (d) Hispanic, 27. The total numbers of students placed by ethnicity for Grade 4 were: African American, 95; Native American, 6; Hispanic, 58; and Caucasian, 256. The total numbers of students placed by ethnicity for Grade 5 were: African American, 98; Native American, 10; Hispanic, 55; and Caucasian, 289 (see Figure 4).

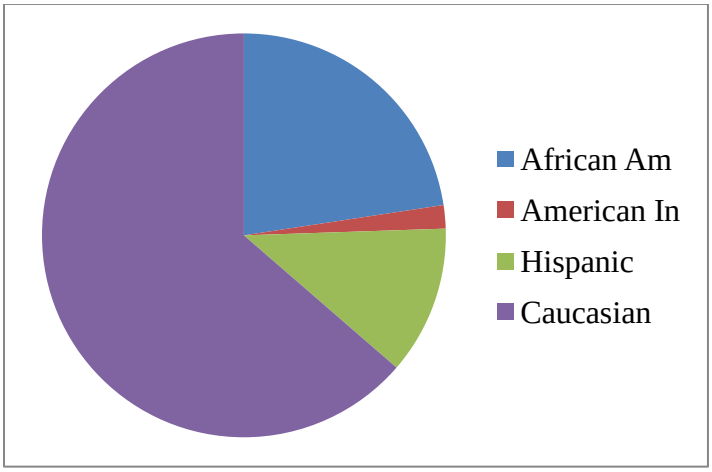

Figure 4. AIG population of County B

N=Total numbers of ethnic populations placed in AIG programs

The AIG program assessors for County C utilized Multiple Assessment Combinations as the criteria for placement into the AIG program. A total of 182 students were placed into the elementary school AIG program for the 2012-2013 school year in Grades 3-5. The total numbers of students placed by grade level were: (a) Grade 3, 52 students; (b) Grade 4, 60 students; and (c) Grade 5, 70 students. The total numbers of student placed by ethnicity for Grade 3 were: (a)

Caucasian, 44; (b) African American, 9; (b) Native American, 2; Hispanic, 1. The total number of students placed by ethnicity for Grade 4 was: (a) Caucasian, 34; (b) African American, 14; (c) Native American, 6; (d) Hispanic, 1. The total numbers of students placed by ethnicity for Grade 5 were: (a) Caucasian, 49; (b) African American, 12; (c) Native American, 6; (d) Hispanic, 0 (see Figure 5).

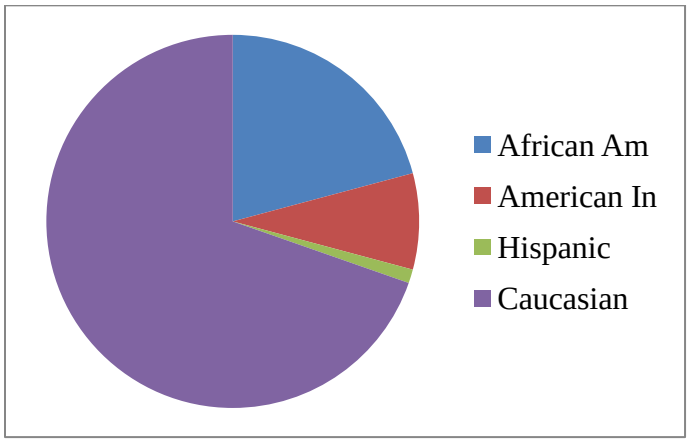

Figure 5. AIG population of County C

N=Total numbers of ethnic populations placed in AIG programs

The AIG program assessors for County D utilized Pathways as the criteria for placement in the AIG program. A total of 109 students were placed in the elementary school AIG program for the 2012-2013 school year in Grades 3-5. The total numbers of students placed by grade level were: (a) Grade 3, 11 students; (b) Grade 4, 44 students; and (c) Grade 5, 54 students. The total numbers of students placed by ethnicity for Grade 3 were: (a) Caucasian, 4; (b) African American, 3; (c) Hispanic, 2; and (d) Native American, 0. The total numbers of students placed by ethnicity for Grade 4 were: (a) Caucasian, 19; (b) African American, 8; (c) Hispanic, 7; and (d) Native American, 1. The total numbers of students placed by ethnicity for Grade 5 were: (a) Caucasian, 25; (b) African American, 8; (c) Hispanic, 22; and (d) Native American, 3 (see Figure 6).

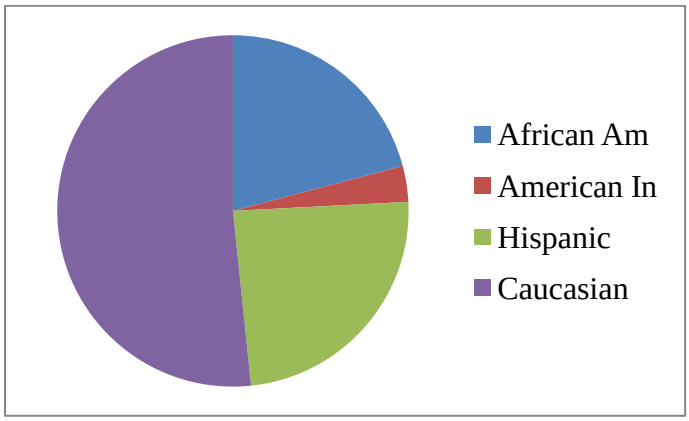

Figure 6. AIG population of County D

N=Total numbers of ethnic populations placed in AIG programs.

The AIG program assessors for County E utilized Multiple Assessment Combinations as the criteria for placement in the AIG program. A total of 188 students were placed in the elementary school AIG program for the 2012-2013 school year in Grades 3-5. The AIG placement for County E begins in Grade 4. The total numbers of students placed by ethnicity for Grade 4 were: (a) Caucasian, 63; (b) African American, 9; Native American, 0; Hispanic, 7. The total numbers of students placed by ethnicity for Grade 5 were: (a) Caucasian, 63; (b) African American, 14; (c) Hispanic, 11; and (d) Native American, 0 (see Figure 7).

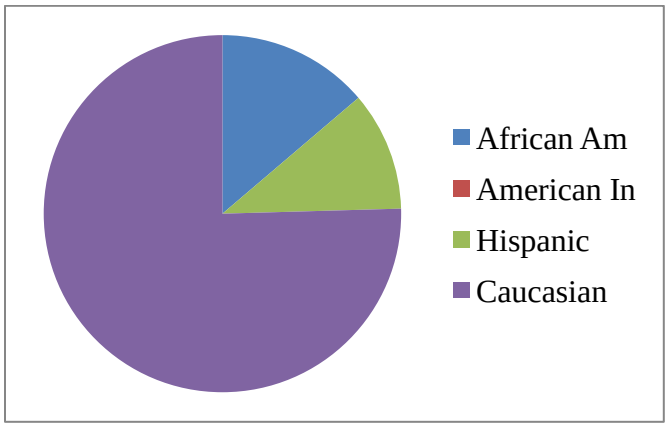

Figure 7. AIG Population of County E

N=Total Numbers of Ethnic Populations placed in AIG programs.

The AIG program assessors for County F utilized Multiple Assessment Combinations as the criteria for placement in the AIG program. A total of 304 students were placed in the elementary school AIG program for the 2012-2013 school year in Grades 3-5. The AIG placement for County F begins in Grade 4. The total numbers of students placed by grade levels 4 and 5 were: Grade 4, 137 students and Grade 5, 167 students. The total numbers of students placed by ethnicity for the Grade 4 were: (a) Caucasian, 86; (b) Hispanic, 26; (c) African American, 15; and (d) Native American, 4. The total numbers of students placed by ethnicity for Grade 5 were: (a) Caucasian, 86; (b) Hispanic, 26; (c) African American,15; (d) and Native American, 4 (see Figure 8).

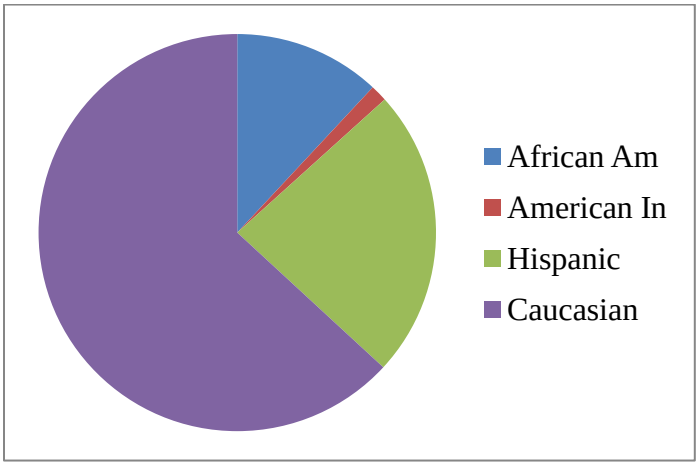

Figure 8. AIG Population of County F

N=Total Numbers of Ethnic Populations placed in AIG programs

Further observations were made regarding the County AIG placement criteria. The Counties which used the Multiple Assessment Combinations for placement (C, E, F) all yielded elevated placement counts for the African American population. Counties C and F yielded elevated placement counts for the Native American population. Counties E and F yielded elevated placement counts for the Hispanic population. All Counties yielded higher placement counts for the Caucasian population (see Figures 9 & 10).

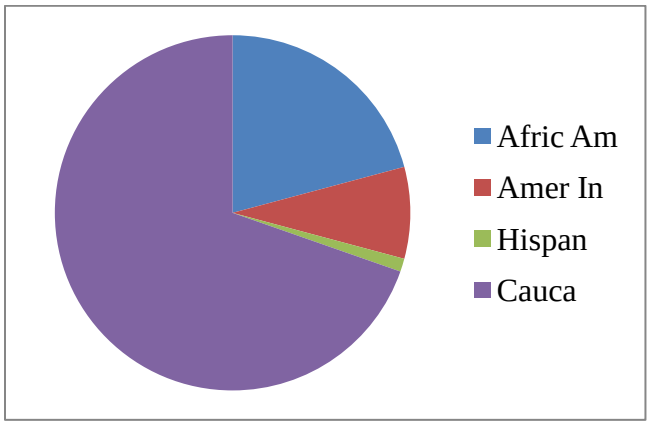

Figure 9. AIG Ethnic Populations placed by Multiple Assessment Combinations

N=Total numbers of ethnicities placed in AIG programs Using Multiple Assessment Combinations criteria.

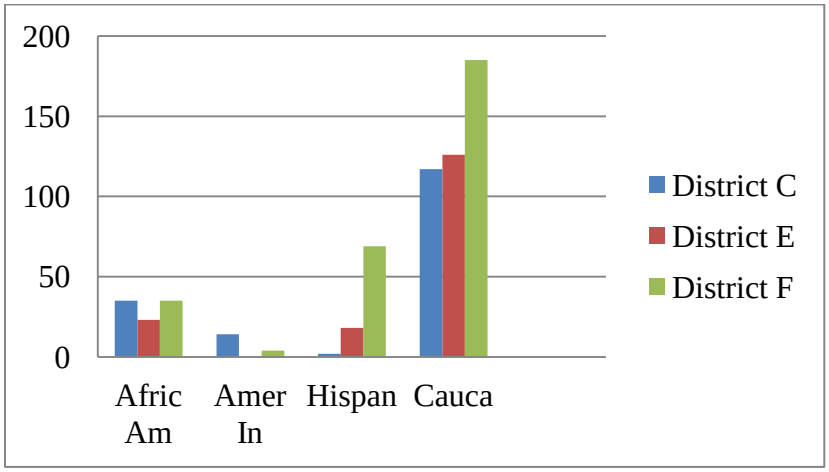

Figure 10. AIG Ethnic Populations Placed by Multiple Assessment Combinations

N=50 Total numbers of ethnic populations placed using Multiple Assessment Combinations criteria in Counties C, E, and F.

Counties B and D assessors, which utilized Pathways placement criteria displayed elevated placement counts for African American, Native American and Hispanic populations. More elevated counts were observed for the Caucasian populations (Figures 11 & 12).

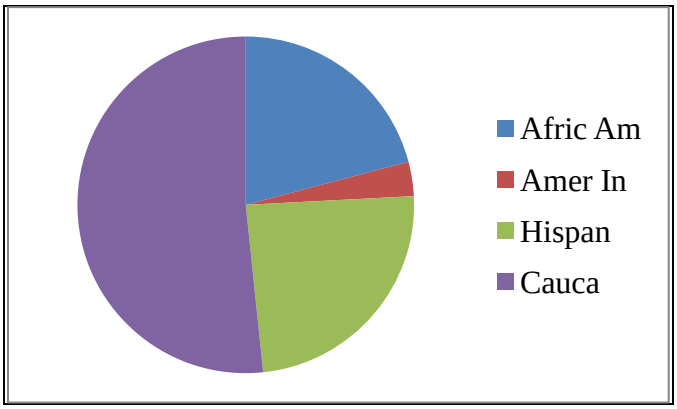

Figure 11. AIG Ethnic Populations Placed by Pathways Criteria

N= Total Numbers of ethnic populations placed into AIG programs using Pathways placement criteria.

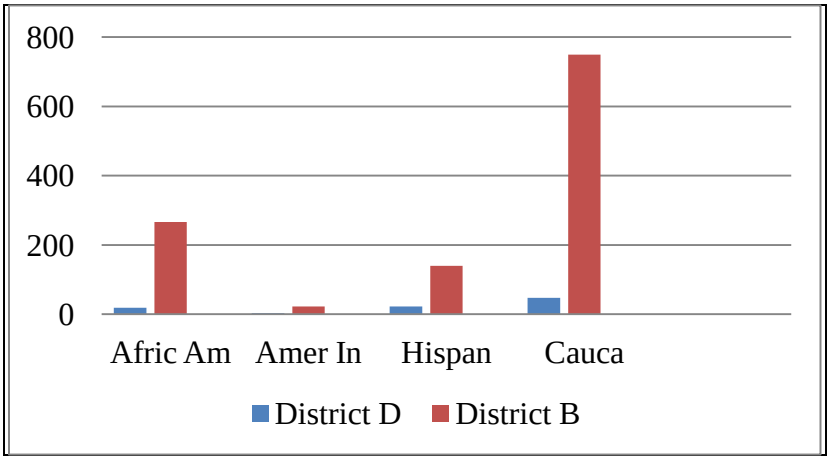

Figure 12. AIG Ethnic Populations Placed by Pathways Criteria

N= 100 Total Numbers of Ethnic Populations placed using Pathways criteria in Counties B and D.

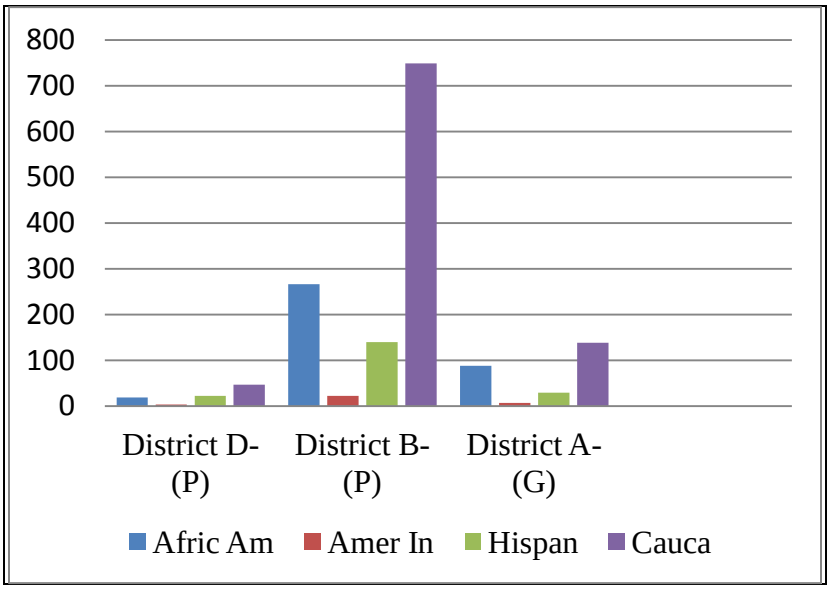

Figure 13. AIG Ethnic Populations Placed Using Pathways and Gateways

N= Total numbers of students placed in Counties A, C & D AIG programs using Pathways and Gateways AIG criteria.

Gateways and Pathways AIG placement criteria were grouped together since County A was the only county in this study that was using the Gateways criteria. Pathways and Gateways criteria displayed elevated placement counts of African American and Hispanic populations.

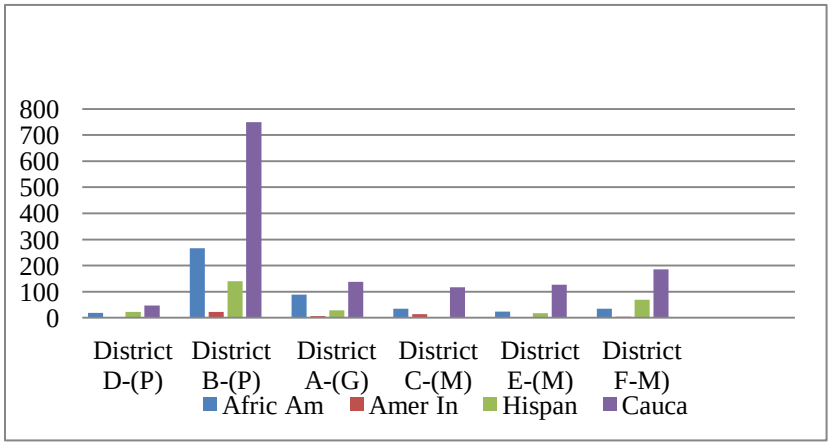

Figure 14. AIG Ethnic Populations Placed using Multiple Assessment Combinations, Pathways, and Gateways.

N=Total Ethnic Populations of Counties A, B, C, D, E and F placed in AIG programs using Multiple Assessment Combinations, Pathways or Gateways Criteria.

Statistical Analysis

The findings from an analysis that examined whether ethnicity is related to the selection method used to place students into a GT program is presented in this section. A separate analysis was conducted for each ethnic group. For each ethnicity, the researcher tested three different hypotheses using a single chi-square test. Each hypothesis covers the full range of selection criteria (e.g., Pathways, Gateways, and Multiple Assessment Combinations). Statistically significant results means the observed difference for any of the methods is statistically significant and expressly indicates the surety that a difference or relationship exists. Pearson Chi-Square tests of association were conducted to test the research hypothesis for each research question.

It is expected that, other things being equal, the placement of students in GT with use of any of the alternative selection criteria would be unrelated to ethnicity. If true, the distribution of students by ethnicity across each of the selection methods would be similar. For the purposes of this study, the distribution of Caucasian students represents the control condition against which placement patterns for other ethnicities are compared. Thus, it was expected that the percentage of ethnic minority students (e.g., African American, Native American, and Hispanic) placed in GT programs with the use of a particular selection criteria would be similar to the percentage of Caucasian students placed into GT programs with use of the same method.

Observed and expected rates of student placement into GT programs, with use of a particular selection criteria (e.g., Pathways, Gateways, and Multiple Assessment Combinations) should be the same for each ethnic group. For the purposes of this analysis, it was expected that the percentage of ethnic minority students (e.g., African American, Native American, and Hispanic) placed in GT programs with use of a particular selection criteria would be similar to the percentage of Caucasian students placed into GT programs with use of the same method. Displayed in Tables

3-6 are the observed and expected number and percentage of students placed in GT programs for each selection criteria. Presented in Table 7 are the results from Pearson's Chi-Square tests of association (see Tables 3, 4, 5, 6, & 7).

The Pearson Chi-Square test was run to test the relationship between the observed and expected number of ethnic minority students (e.g., African American, Native American, and Hispanic) in GT programs. Consideration was given in regards to the various placement criteria (e.g., Pathways, Gateways, and Multiple Assessment Combinations). The findings help to explain whether the actual distribution of minority students into placement method categories was different from the expectations, based on the actual distribution of Caucasian students. Other things being equal, it is reasonable to expect that the two actual distributions (e.g., ethnic minority and Caucasian) are the same. The results address each research question, that is, is there a statistically significant relationship between the selection method and placement of ethnic minority groups into GT programs.

To test each hypothesis, the researcher first calculated the observed number of students placed by each alternative gifted selection criterion as recorded from the data received from the counties. Observed student counts for each ethnic group are shown in Table 3.

Table 3. Observed Number of Students Accepted by Ethnicity and Placement Criteria

Ethnicity	Pathways	Gateways	Multiple Assessment Combinations	Total Number of Students
African American	285	88	93	466
Hispanic	162	29	88	279
Native American	25	7	18	50
Caucasian	797	138	428	1363

The observed percentage of students accepted into a GT program was calculated for each ethnic group and alternative selection criterion. The observed percentage for each ethnic group was calculated by dividing the observed number of students in that group who were placed by a given alternative selection criterion by the total number of students in that group who were accepted into a GT program. Observed percentages for each ethnic group and alternative selection criterion are shown in Table 4.

Table 4. Observed Percentage of Students Accepted by Ethnicity and Placement Criteria

Ethnicity	Pathways	Gateways	Multiple Assessment. Combinations
African American	61.2%	18.9%	20.0%
Hispanic	58.1%	10.4%	31.5%
Native American	50.00%	14.00%	36.00%
Caucasian (multiplier)	**58.5%**	**10.1%**	**31.4%**

Next, the expected number of students from each ethnic group and alternative selection criterion was calculated by multiplying the total number of students in each group with a constant, which was the actual or observed percentage of Caucasian students placed into GT programs by each alternative selection criterion. This percentage was used as a multiplier to determine the expected percentage of students from each ethnic group who would be placed by the Pathways criterion. Therefore, out of a total of 466 African American students placed into a GT program, it was expected that 273 of those students would be placed through each of the placement criteria. For example, out of a total of 466 African American students placed into a GT program, it was

expected that 273 of those students would be placed by the Pathways criterion. (466 x 58.5% = 272.61).

The same method was used to calculate expected student counts for each ethnic group and alternative selection criterion (see Table 5). For the purpose of this study, Caucasian student numbers were only used to calculate the expected counts. The analysis only examined the correlation between observed and expected counts for a given ethnicity.

Table 5. Expected Numbers of Students Accepted by Ethnicity and Placement Criteria

Ethnicity	Pathways	Gateways	Multiple Assessment Combinations	Total Number of Students
African American	273	47	146	466
Hispanic	163	28	88	279
Native American	29	5	16	50
Caucasian	797	138	428	1363

Other things equal, if ethnicity is unrelated to how students are placed into a GT program, it is expected that the ratio of observed counts to expected counts for African American, Hispanic and Native American students for each alternative selection criterion would be the same as for Caucasian students (i.e., the observed percentage of students placed by a given criterion would be the same across ethnic groups). In preparation for performing the Pearson Chi-Square analysis, the observed and expected student counts for each ethnic group and alternative selection criterion were compared (see Table 6).

Table 6. Student Count Data for Pearson Chi-Square Analysis Accepted by Criteria and Ethnicity (Total)

Pearson's Chi-Sq Category	Pathways	Gateways	Multiple Assessment Combinations
Observed (African American)	285	88	93
Expected (African American)	273	46	146
Observed (Hispanic)	162	29	88
Expected (Hispanic)	163	28	88
Observed (Native Am)	25	7	18
Expected (Native Am)	29	5	16

The data that is displayed in Table 7 represents the test statistics of the Pearson Chi-Square analysis. The researcher determined that the level of statistical significance would be at the 0.05 level. A *p*-value less than 0.05 would indicate a statistically significant difference. For the African American population, the Pearson Chi-Square test returned a *p*-value that was 0.000, which was less than the pre-determined 0.05 level of significance. For the Hispanic population, a *p*-value of 0.979 was received as which is greater than >0.05. For the Native American population, the Pearson Chi-Square returned a *p*-value of 0.4489 which is greater than >0.05.

Table 7. Pearson Chi-Square Test Results by Ethnicity Category and Test Statistic

Pearson's Chi-Sq Category	p-value
African American	0.000
Hispanic	0.979
Native American	0.448

African American Students

RQ1: Is there a significant relationship between the alternative gifted selection criteria (Pathways, Gateways, and Multiple Assessment Combinations) used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American, Native American**, and **Hispanic** students into gifted and talented programs?

$H_{1:}$ There is a significant relationship between the alternative gifted selection criteria, specifically Pathways used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American** students into gifted and talented programs. According to the Pearson Chi-Square test results, this hypothesis is accepted.

H_{01} There is no significant relationship between the use of the *Pathways* alternative gifted selection criteria and the placement of traditionally underrepresented **African American** students into gifted and talented programs. According to the Pearson Chi-Square test result, this null hypothesis is rejected.

H_2: There is a significant relationship between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American** students into GT talented programs. According to the Pearson Chi-Square test results, this hypothesis is accepted.

$H_{02:}$ There is no significant relationship between the use of the *Gateways* alternative gifted selection criteria and the placement of traditionally underrepresented **African American** students into gifted and talented programs. According to the Pearson Chi-Square test result, this null hypothesis is rejected.

H_3: There is a significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combinations*, used for the identification of students in selected North

Carolina counties and the placement of traditionally underrepresented **African American** students into GT programs. According to the Pearson Chi-Square test results, this hypothesis is accepted.

$H_{03:}$ There is no significant relationship between the use of the *Multiple Assessment Combinations* alternative gifted selection criteria and the placement of traditionally underrepresented **African American** students into gifted and talented programs. According to the Pearson Chi-Square test result, this null hypothesis is rejected.

For RQ1, the researcher first calculated the observed number of students placed by the Pathways criteria as recorded from the data received from two of the six counties. The observed count of African American students was 285 (see Table 3). The breakdown of actual percentages of African Americans who were placed by Pathways was calculated by dividing the observed number of students by the total number of students, 285 ÷ 466=61.2% (see Table 4). Next, the expected values were calculated by multiplying the total number of students by the constant which was the percentage distribution for the Caucasian population for Pathways, 466 × 58.6%= 272.61, thus yielding the total expected value for African American students accepted into the AIG program using the Pathways criteria (see Table 5). In preparation for performing the Pearson Chi-Square analysis, the observed and expected student counts for the African American, Native American, and Hispanic population were shown in a table under the appropriate AIG placement criteria (see Table 6). The researcher repeated the process for Gateways, as well as for Multiple Assessment Combinations criteria.

As noted, a Pearson Chi-Square test of association was conducted to look for statistically significant differences in how students from each ethnic group were distributed across the selection method categories. If ethnicity is unrelated to the selection criteria used to place students into GT programs, it is expected that the distribution across selection methods (e.g., Pathways, Gateways,

and Multiple Assessment Combinations) for each of the ethnic groups would be the same. For African American students, the chi-square test returned a *p*-value that was less than < 0.05 (0.000). The null hypotheses were rejected, and the hypotheses were accepted (see Table 7). The results indicated that a highly statistically significant difference existed between the observed and expected percentages of African American students placed using Pathways, Gateways, and Multiple Assessment Combinations criteria. The results further indicated that the observed difference in how African American students were placed in GT programs could be related to the ethnicity of the students.

Native American Students

RQ1: Is there a significant relationship between the alternative gifted selection criteria (Pathways, Gateways, and Multiple Assessment Combinations) used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American, Native American**, and **Hispanic** students into gifted and talented programs?

H_4: There is a significant relationship between the alternative gifted selection criteria, specifically *Pathways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs. According to the Pearson Chi-Square test results, this hypothesis is rejected.

H_{04}: There is no significant relationship between the alternative gifted selection criteria, specifically *Pathways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs. According to the Pearson Chi-Square test result, this null hypothesis is accepted.

H_5: There is a significant relationship correlation between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties

and the placement of traditionally underrepresented **Native American** students into GT programs. According to the Pearson Chi-Square test results, this hypothesis is rejected.

H_{05}: There is no significant relationship correlation between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs. According to the Pearson Chi-Square test result, this null hypothesis is accepted.

H_6: There is a significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combinations*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs. According to the Pearson Chi-Square test results, this hypothesis is rejected.

H_{06}: There is no significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combinations*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs. According to the Pearson Chi-Square test result, this null hypothesis is accepted.

For RQ1, Research Question One, the researcher first calculated the observed number of students placed by the Pathways criteria as recorded from the data received from two of the six counties. The observed count of Native American students was 25 (see Table 3). The breakdown of actual percentages of Native Americans who were placed by Pathways was calculated by dividing the observed number of students by the total number of students, 25 ÷ 50=50.0% (see Table 4). Next, the expected values were calculated by multiplying the total number of students by the constant which was the percentage distribution for the Caucasian population for Pathways, 50 × 58.6%= 29, thus yielding the total expected value for Native American students accepted in the

AIG program using the Pathways criteria (see Table 5). In preparation for performing the actual Pearson's Chi-Square analysis, the observed and expected student counts for the African American, Native American, and Hispanic population were placed in a table under the appropriate AIG placement criteria (see Table 6). The researcher repeated the process for Gateways, as well as for Multiple Assessment Combinations criteria.

A Pearson Chi-Square test of association was conducted, in order to identify the whether there were statistically significant differences in how students from each ethnic group were distributed across the selection method (e.g., Pathways, Gateways, and Multiple Assessment Combinations) categories. If ethnicity was unrelated to the selection criteria used to place students in GT programs, it was expected that the distribution across selection methods for each of the ethnic groups would be the same. For Native American students, the Pearson Chi-Square test returned a *p*-value that was greater than > 0.05 (0.4489). The null hypotheses were accepted, and the hypotheses were rejected (see Table 7). The results indicated that a statistically significant difference did not exist between the observed and expected percentages of Native American students placed using Pathways, Gateways, and Multiple Assessment Combinations criteria. The results further indicated that the observed difference in how Native American students were placed in GT programs, was not related to the ethnicity of the students.

Hispanic Students

RQ1: Is there a significant relationship between the alternative gifted selection criteria (Pathways, Gateways, and Multiple Assessment Combinations) used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American, Native American**, and **Hispanic** students into gifted and talented programs?

H_7: There is a significant relationship between the alternative gifted selection criteria, specifically *Pathways,* used for the identification of students in selected North Carolina counties, and the placement of traditionally underrepresented **Hispanic** students into GT programs. According to the Pearson Chi-Square test results, this hypothesis is rejected.

H_{07}: There is no significant relationship between the alternative gifted selection criteria, specifically *Pathways,* used for the identification of students in selected North Carolina counties, and the placement of traditionally underrepresented **Hispanic** students into GT programs. According to the Pearson Chi-Square test result, this null hypothesis is accepted.

H_8: There is a significant relationship between the alternative gifted selection criteria, specifically *Gateways,* used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Hispanic** students into GT programs. According to the Pearson Chi-Square test results, this hypothesis is rejected.

H_{08}: There is no significant relationship between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Hispanic** students into GT programs. According to the Pearson Chi-Square test result, this null hypothesis is accepted.

H_9: There is a significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combina*tions, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Hispanic** students into GT programs. According to the Pearson Chi-Square test results, this hypothesis is rejected.

H_{09}: There is no significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combina*tions, used for the identification of students in selected North

Carolina counties and the placement of traditionally underrepresented **Hispanic** students into GT programs. According to the Pearson Chi-Square test result, this null hypothesis is accepted.

For RQ1, the researcher first calculated the observed number of students placed by the Pathways criteria as recorded in the data received from two of the six counties. The observed count of Hispanic students was 162 (see Table 3). The breakdown of percentage of Hispanic students**,** who were placed by Pathways**,** was calculated by dividing the observed number of students by the total number of students, 162 ÷ 279=58.1% (see Table 4). Next, the expected values were calculated by multiplying the total number of students by the constant which was the percentage distribution for the Caucasian population for Pathways, 279 × 58.6%= 163. Thus, the total expected value for Hispanic students accepted into the AIG program, with use of the Pathways criteria (see Table 5). In the Pearson Chi-Square analysis, the observed and expected student counts for the African American, Native American, and Hispanic population were placed in a table under the appropriate AIG placement criteria (see Table 6). The researcher repeated the process using Gateways, as well as Multiple Assessment Combinations.

A Pearson Chi-Square test of association was conducted to determine if there were statistically significant differences in how students from each ethnic group were distributed across the selection method (e.g., Pathways, Gateways, and Assessment Combinations) categories. If ethnicity was unrelated to the selection criteria used to place students in GT programs, it was expected that the distribution across selection methods for each of the ethnic groups would be the same. For Hispanic students, the Pearson Chi-Square test produced a *p* value of 0.9793, which was greater than > 0.05. The null hypothesis was accepted, and the hypothesis was rejected (see Table 7). The result was an indication that a statistically significant difference did not exist between the observed and expected percentages of Hispanic students placed with use of Pathways criteria. The

findings indicated that the observed difference in how Hispanic students were placed in GT programs was not related to the ethnicity of the students.

CHAPTER FIVE: DISCUSSION

The purpose of this quantitative correlational, ex post facto research study was to determine whether a correlation existed between the use of alternative gifted selection criteria (e.g., Pathways, Gateways, and Multiple Assessment Combinations (North Carolina Department of Public Instruction (NCDPI, 2013a) and the placement of African American, Native American, and Hispanic students into the elementary gifted programs. The problem, which was addressed in this study, was that African American, Native American, and Hispanic students are underrepresented in GT elementary school programs in many counties of North Carolina as indicated in the North Carolina Gifted and Talented Plans for 2010-2013 (NCDPI, 2013). Colangelo and Zaffrann (1979) maintained that academic potential of culturally diverse children is not recognized and the use of standard IQ scores does not identify these children's abilities.

Summary of the Findings

Often the staff of GT programs has struggled to find identification measures which would allow ethnic minority students to adequately showcase their gifted abilities. African American, Native American, and Hispanic populations have often been underrepresented in GT programs (Ford, 1998; Ford, Grantham & Whiting, 2008; Ford, Tarek, & Whiting, 2008). North Carolina educators have worked diligently to identify assessment measures which can be used to positively affect the underrepresentation of these ethnic populations. Although this underrepresentation has continued to exist, conscientious efforts have been made to improve the issue, as was reported in each of the School District Local AIG Plans for the 2010-2013 school years (NCDPI, 2013). A brief summary of the Pearson's Chi-Square statistical analyses of the data provided by the six counties is provided. For each ethnicity, three tests were performed to address the nine hypotheses,

one test for each cluster of ethnic hypotheses. Three different hypotheses were tested with a single chi-square procedure. Given the purpose of the Pearson Chi-Square test, each hypothesis addresses the full range of selection criteria (e.g., Pathways, Gateways, and Multiple Assessment Combinations), so a statistically significant result meant that the observed difference for any of the selection criteria was statistically significant.

Research Hypotheses and Findings

African American Students

$H_{1:}$ There is a significant relationship between the alternative gifted selection criteria, specifically Pathways used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American** students into gifted and talented programs.

H_1 was accepted. For African American students, the chi-square test returned a *p*-value that was less than < 0.05 (0.000). Through use of the chi-square statistical test, it was determined that there was a highly significant difference (0.000) between the observed and expected percentages of African American students' placement, with use of Pathways criteria. This finding indicated that the observed difference in how African American students were placed into GT programs could be related to the ethnicity of the students.

H_2: There is a significant relationship between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American** students into GT talented programs.

H_2 was accepted. For African American students, the Pearson Chi-Square test returned a *p*-value that was less than < 0.05 (0.000). The Pearson's Chi-Square test of association results

revealed that a highly statistically significant difference (0.000) existed between the observed and expected percentages of African American students placed using Gateways criteria. This result indicated that the observed difference in how African American students were placed into GT programs could be related to the ethnicity of the students.

H_3: There is a significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combinations*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **African American** students into GT programs.

H_3 was accepted. The Pearson Chi-square test returned a *p*-value that was less than < 0.05 (0.000) for the African American student population. It was discovered that a highly statistically significant difference (0.000) existed between the observed and expected percentages of African American students placed using Multiple Assessment Combinations criteria. This result indicated that the observed difference in how African American students were placed into GT programs could be related to the ethnicity of the students.

Native American Students

H_4: There is a significant relationship between the alternative gifted selection criteria, specifically *Pathways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs.

H_4 was rejected. For Native American students, the Pearson Chi-Square test returned a *p*-value that was greater than > 0.05 (0.448). Through the use of the chi-square statistical test it was discovered that a highly statistically significant difference (0.448) did not exist between the observed and expected percentages of Native American students placed using Pathways criteria.

The result indicated that the observed difference in how Native American students were placed into GT programs was not related to the ethnicity of the students.

H_5: There is a significant relationship between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs.

H_5 was rejected. For Native American students, the Pearson Chi-Square test returned a *p*-value that was greater than > 0.05 (0.448). It was discovered that a highly statistically significant difference (0.448) did not exist between the observed and expected percentages of Native American students placed using Gateways criteria. This result indicated that the observed difference in how Native American students were placed into GT programs was not related to the ethnicity of the students.

H_6: There is a significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combinations*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Native American** students into GT programs.

H_6 was rejected. For Native American students, the Pearson Chi-Square test returned a *p*-value that was greater than > 0.05 (0.448). It was discovered that a highly statistically significant difference (0.448) did not exist between the observed and expected percentages of Native American students placed using Multiple Assessment Combinations criteria. This result indicated that the observed difference in how Native American students were placed into GT programs was not related to the ethnicity of the students.

Hispanic Students

H_7: There is a significant relationship between the alternative gifted selection criteria,

specifically *Pathways*, used for the identification of students in selected North Carolina counties, and the placement of traditionally underrepresented **Hispanic** students into GT programs.

H_7 was rejected. For Hispanic students, the Pearson Chi-Square test produced a *p* value, which was greater than > 0.05 (0.979). It was discovered that a statistically significant difference (0.979) did not exist between the observed and expected percentages of Hispanic students placed using Pathways criteria. This result indicated that the observed difference in how Hispanic students were placed into GT programs was not related to the ethnicity of the students.

H_8: There is a significant relationship between the alternative gifted selection criteria, specifically *Gateways*, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Hispanic** students into GT programs.

H_8 was rejected. For Hispanic students, the Pearson Chi-Square test produced a *p* value, which was greater than > 0.05 (0.979). It was discovered that a statistically significant difference (0.979) did not exist between the observed and expected percentages of Hispanic students placed using Gateways criteria. This result indicated that the observed difference in how Hispanic students were placed into GT programs was not related to the ethnicity of the students.

H_9: There is a significant relationship between the alternative gifted selection criteria, specifically *Multiple Assessment Combina*tions, used for the identification of students in selected North Carolina counties and the placement of traditionally underrepresented **Hispanic** students into GT programs.

H_9 was rejected. For Hispanic students, the Pearson Chi-Square test produced a *p* value, which was greater than > 0.05 (0.979). It was discovered that a statistically significant difference (0.979) did not exist between the observed and expected percentages of Hispanic students placed

using Multiple Assessment Combinations criteria. This result indicated that the observed difference in how Hispanic students were placed into GT programs was not related to the ethnicity of the students.

Discussion of the Findings

During the researcher's review of the literature, she found that there were only a limited number of studies, in which the author(s) addressed the correlation of GT placement criteria and the placement of African American, Native American, and Hispanic students in GT elementary programs. According to Coleangelo and Zaffrann (1979) and Job (2012), often children from culturally diverse environments were not recognized for their academic potential, nor did the use of the standard IQ scores identify those children's abilities.

The findings from this study are important for those individuals involved in education. Specifically, educators in the field of GT will be interested in the relationship between the selection criteria (e.g., Pathways, Gateways, and Multiple Assessment Combinations) and the placement of African American, Native American, and Hispanic students. A statistically significant difference result was discovered for African American students (0.000), but not for Native American students (0.448), or Hispanic students (0.989). It can be inferred that by using alternative acceptance criteria (Pathways, Gateways, and Multiple Assessment Combinations) more Native American and Hispanic populations will be placed into AIG programs as opposed to the placement of African American populations. Furthermore, the observed difference in how African American students were placed into GT programs could be related to the ethnicity of the students.

The research results indicated that there was a statistically significant difference in the correlation between the African American population and the alternative selection criteria as opposed to Native American and Hispanic populations. The researcher believes that one possible

reason for this result has to do with cultural differences. Perhaps there is a language barrier. The placement assessments do not use the same language as what is spoken by many African Americans. The various dialects or vernacular of the students and the "slang" that have been adopted within many communities makes it difficult for assessment success.

Another thought is that based on culture and ethnicity, Native Americans and Hispanic populations have a plethora of educational support programs available. Native American populations have the Title V and Title VII programs which provide substantial support in all areas. Federal and state programs provide support as well. Hispanic populations have the English as a Second Language programs (ESL) which provide culturally and linguistically appropriate services and support. Although the amount of support varies from community to community, most African American students receive academic support from the church, sororities, fraternities, and civic organizations. Other support programs are in place for college and beyond, but few are available for younger children. Financial support through grants and scholarships is available for all ethnicities for higher education purposes.

The theory of multiple intelligences (MI) supports the need for the alternative gifted selection criteria (Gardner, 1983). Bélanger and Gagné (2006) found that, if the identification process was based on the use of multiple criteria, it was more likely that underrepresented populations would be identified. Therefore, if appropriate gifted educational programs and specifically selected assessments were not considered, then proportionality of underrepresented populations would not be achieved.

Study Limitations

Although this research study was conducted with great care, the researcher is aware of possible limitations to the study. Only data from a small portion (i.e., six counties) of the entire

elementary school AIG population of the state of North Carolina was considered during this study. For these findings to be generalized to a larger population, data should have been collected from an increased number of counties or in other states. Although a total of 35 school districts were contacted, only seven agreed to participate. However, the last district responded after the Liberty University IRB had approved the study. The identified school districts were selected because they were representative of each region of North Carolina.

Another limitation to the study was the length of time it was conducted, one year. If the length of the study had been extended so that longitudinal data were available, the findings might have yielded a different conclusion.

The researcher was aware of potential threats to the internal validity, which included history and selection. By obtaining as much detailed procedural information as possible and by selecting the appropriate research design, the threats to internal validity from history and selection were minimized. In an effort to maximize external validity, the researcher defined the variables with great care and random selection of participant counties was used. Correlation is not causation and the researcher is inferring, based on the data, that the observed differences in how African American students were placed could be related to ethnicity. The results indicate, at most that the observed placement of African American students into GT programs might be related to their ethnicity. Future research using different statistical techniques is warranted to more definitely test whether the relationship between the key variables is causally related.

Methodological Implications/Practical Implications

The following methodological and practical implications are based upon the findings of this study.

1. Officials or designees (e.g., NCDPI personnel, Superintendents, Principals, School Counselors, GT personnel) from each county/district should engage in round-table discussions in regard to the GT assessments data in an effort to determine which criteria supports the identification of underrepresented populations (e.g., African American, Native American, and Hispanic) for placement into GT programs. The data substantiates and the discussions enlighten the readers (e.g., educators, administrators, and decision makers), which are necessary components if positive changes are to be made regarding ethnic minority representation in elementary GT programs. The goal would be to consider and select the criteria which have been found to be more effective in the placement of specific ethnic minority populations (e.g., African American, Native American, and Hispanic).

2. More officials or designees (e.g., NCDPI personnel, Superintendents, Principals, School Counselors, GT personnel) of counties/districts should consider participating in research studies of this kind, in an effort to improve ethnic minority representation in GT programs. Many counties/districts were not willing to participate in this research for reasons which were not revealed. Research of this kind could provide ideas for improvement for the counties/districts when necessary. The opportunity for self-reflection would benefit all counties/districts once the results of the research are revealed.

3. Decision makers (e.g., NCDPI personnel, Superintendents, Principals, School Counselors, GT personnel) of counties/districts should consider utilizing assessments which encompass MI as a means to identify more ethnic minority students into the GT programs since most do not exemplify the typical signs of giftedness.

4. NCDPI personnel, Superintendents, Principals, School Counselors, GT personnel of counties/districts should consider establishing gifted programs which enhance the gifts of students

which are atypical and are supported by the MI. Most GT programs only address intellectual and academic areas of giftedness.

5. Counties/Districts should consider the implementation of more teacher training opportunities in the areas of identifying the characteristics of giftedness and the student identification process. Awareness of gifted characteristics (typical and atypical) and gifted identification process would allow teachers to better meet the needs of those identified as gifted.

Recommendations for Future Research

The data for this study were collected and analyzed over the duration of a one year period and analyzed, although the duration of the last NCDPI Local Academically and Intellectually Gifted (AIG) Plan period covered three years. Taking into consideration that this study only covered a period of one year, I recommend that this study be duplicated using longitudinal data. The purpose would be to see if further analysis would yield different results.

Although the researcher solicited the support of 35 counties, seven were willing to actually participate in this research study. Only six of the seven counties met the timelines for data submission. Another recommendation would be to seek and secure more counties or school districts which would be willing to participate in the AIG research study. Replication of this study could not only include the counties and school districts of the state of North Carolina but could expand to other states considering the various AIG placement criteria.

Consideration should be given to a study using the qualitative methodology as it would increase the body of knowledge regarding teacher impact involving the identification process. Additionally the impact of the School Counselor on the identification process would be another recommended area of study to increase the body of knowledge as well.

Finally, consideration should be given to a research study of the learning styles and MI of the students of traditionally underrepresented ethnic populations as they relate to the AIG identification process. If more research was conducted based on the AIG identification process/ criteria, and the merging of the learning styles, and MI of minority students, a more global criteria could be created and support their acceptance into the program, possibly eliminating their underrepresentation.

Reflections

This research opportunity was both personally rewarding and educationally enlightening. After having earned my gifted certification and having served as a teacher in the GT program for many years, this research opportunity allowed me to examine the GT placement criteria on a larger scale, considering six counties, as opposed to one. The research broadened the scope of my understanding regarding the issues in student identification, variations in GT criteria, the current GT research and what is occurring across the state of North Carolina in gifted education.

The research supported the hypotheses that there was a relationship between the GT identification criteria (Pathways, Gateways, and Multiple Assessment Combinations) and the placement of African American populations into the gifted programs. The results of this study revealed, to my surprise, that there was no relationship between the GT identification criteria (Pathways, Gateways, and Multiple Assessment Combinations) and the placement of Native American and Hispanic populations. Although more research is needed regarding the area of GT alternative placement criteria, the results of this research study provide an enlightening beginning.

I believe that this study will significantly enlighten educators as to the benefits of offering alternative selection criteria to underrepresented ethnic minority populations in GT programs. If specific assessments can be identified which place the African American, American Indian, and

Hispanic populations into the GT programs at a higher percentage, these assessments should be utilized regularly, rather than intermittently. Prayerfully, strategies to improve the underrepresentation of these ethnic minority populations in GT programs will be implemented in an effort to propel towards positive transformations as a result of this study. Additionally, the present state of the underrepresentation of these ethnic minority populations in the GT programs as we know it will ultimately be eradicated.

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APPENDIX

Appendix A: First Letter to School Districts Seeking Permission to Conduct Research

Dear Dr._____:

As a graduate student in the Education Department at Liberty University, I am conducting research as a part of the requirement for a Doctorate of Education degree. The title of my causal- comparative ex post facto research study is "Gifted, and Talented Selection Criteria of North Carolina: An Investigative Study." The purpose of this study is to determine whether or not a correlation exists between the alternative gifted selection criteria, specifically Pathways, Gateways, and Alternative Assessment Combinations, and the placement of African American, Native American and Hispanic students into the elementary gifted programs. The research study will also focus on why the alternative/non-traditional gifted selection criteria does or does not make a difference in the placement rate of all elementary ethnic populations placed in gifted, and talented programs. The theoretical framework for this research will be Gardner's Multiple Intelligence Theory, and Vygotsky's Social Cultural Theory.

I am writing seeking permission to access, and utilize student data pertaining to gifted, and talented elementary students selected for the program for the 2010-2013 school years. This is the data from the most recent District Gifted, and Talented Plan as mandated by the state of North Carolina. Listed below are questions regarding specific data that will be needed for this study.

School District, and Location
What is the total number of students (by ethnicity, and age) who have been placed into the gifted programs (2010-2013)?
What is the total number of students (by ethnicity, and age) who were placed into the gifted and talented programs using traditional criteria?
What is the total number of students by (ethnicity placed, and age) using traditional and non-traditional (alternative) criteria?
Which specific alternative/non- traditional assessment(s) tend to favor the placement of each ethnicity the most?
What are the average scores for placement achieved by ethnicity using the traditional and non-traditional/ alternative criteria?
My final request is to receive information which identifies the specific non-traditional gifted and talented placement criteria that allows the most students to be accepted into the gifted and talented programs?

All of the data, and relevant information will remain confidential, and the data will not contain anything that will identify individual subjects or school districts. The data will be stored securely. There will be no survey request, nor will there be a cost attached to this request. Upon completion of the study, all results of the research will be shared with the appropriate school district officials.

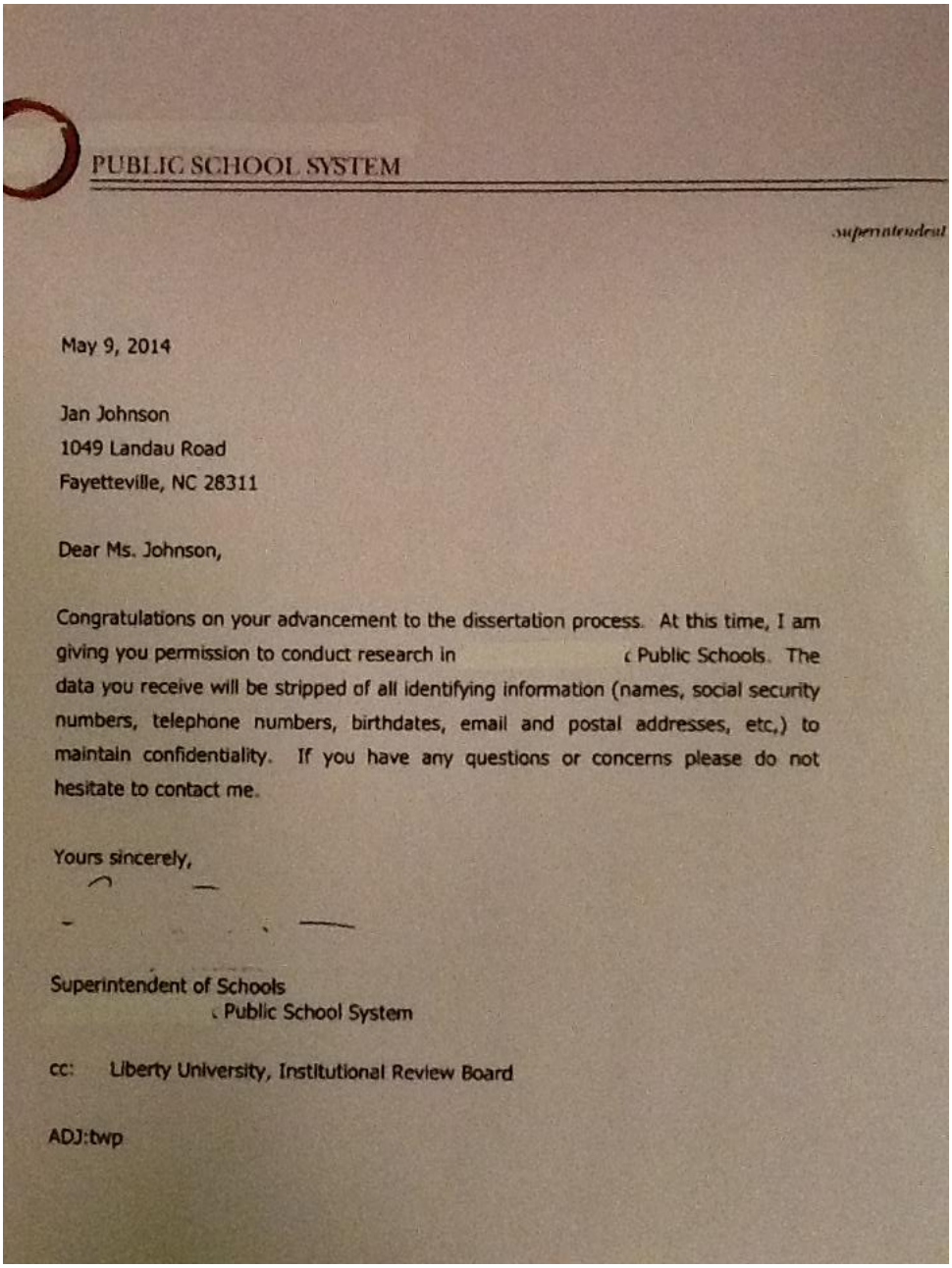
Thank you for your consideration. In an effort to comply with the rules, and regulations of Liberty University's IRB, if I am afforded the opportunity to use the data from your school district, I will need written permission to utilize the data requested. The permission letter will need to be on _____School District's letterhead with the appropriate signatures. I understand that the approval of this study is contingent upon the approval of _____ School's Research Committee's approval.

Thanks again for your consideration. If there are any questions pertaining to my study, please feel free to contact me.

Sincerely,
Mrs. Jan D. Johnson
Doctoral Student at Liberty University

Note. First letter sent to School Districts seeking permission to conduct research.

Appendix B: Permission from School



PUBLIC SCHOOL SYSTEM

superintendent

May 9, 2014

Jan Johnson
1049 Landau Road
Fayetteville, NC 28311

Dear Ms. Johnson,

Congratulations on your advancement to the dissertation process. At this time, I am giving you permission to conduct research in (Public Schools. The data you receive will be stripped of all identifying information (names, social security numbers, telephone numbers, birthdates, email and postal addresses, etc,) to maintain confidentiality. If you have any questions or concerns please do not hesitate to contact me.

Yours sincerely,

Superintendent of Schools
(Public School System

cc: Liberty University, Institutional Review Board

ADJ:twp

Appendix C: IRB Approval Letter

Dear Jan,

The Liberty University Institutional Review Board has reviewed your application in accordance with the Office for Human Research Protections (OHRP), and Food, and Drug Administration (FDA) regulations, and finds your study does not classify as human subjects research. This means you may begin your research with the data safeguarding methods mentioned in your approved application.

Your study does not classify as human subjects research because your study involves deidentified archival data.

Please note that this decision only applies to your current research application and that any changes to your protocol must be reported to the Liberty IRB for verification of continued non-human subjects research status. You may report these changes by submitting a new application to the IRB and referencing the above IRB Application number.

If you have any questions about this determination, or need assistance in identifying whether possible changes to your protocol would change your application's status, please email us at irb@liberty.edu.

Sincerely,

Fernando Garzon, Psy.D.
Professor, IRB Chair
Counseling

(434) 592-4054

Liberty University | Training Champions for Christ since 1971

Note. Institutional Review Board's letter granting the researcher approval to conduct research.

Appendix D: Second Letter to School Districts

To Whom It May Concern:

As stated in my previous letter, my research was pending Liberty University's Institutional Review Board's approval. I have now been granted permission to conduct my research. The title of my quantitative correlation ex post facto research study is "Gifted, and Talented Selection Criteria of North Carolina: An Investigative Study." The purpose of this study is to determine whether or not a correlation exists between the alternative gifted selection criteria, specifically Pathways, Gateways, and Alternative Assessment Combinations and the placement of African American, Native American, and Hispanic students into the elementary gifted programs.

Thank you for granting me permission to access, and utilize student data pertaining to gifted, and talented elementary students selected for the program during the 2012-2013 school year. I am requesting that the data be placed on a spreadsheet (please see attachment). I have attached a spreadsheet to this message for your convenience, so that you may input the requested data. Listed below is the specific data that I will need for this study.

What is the total number of students (by ethnicity, and gender) who have been placed into the gifted programs (2012-2013)? *Please provide actual numbers, as well as percentages.
What is the total number of students (by ethnicity, gender and grade level) who were placed into the gifted and talented programs using Pathways, Gateways, or Alternative Assessment Combinations criteria? *Whichever criteria pertain to your School District.
What is the total number of students (by ethnicity and gender) placed using traditional and non-traditional (alternative) criteria? (Ex: Pathway One, and Pathway Two; Gateway One and Gateway Two; Aptitude and Achievement or Cognitive Ability, and Aptitude)
Which specific alternative/non- traditional assessment(s) tend to favor the placement of each ethnicity the most (by ethnicity, gender and grade level)?

Thank you for your assistance in providing the above data (using the spreadsheet). If more information is needed, I will contact you. If there are any questions pertaining to my study, please feel free to contact me.

Sincerely,

Mrs. Jan D. Johnson
Doctoral Student at Liberty University

Note. Second letter to School Districts once IRB approval had been granted to conduct research.

Appendix E: Permission Granted

From: customercare@copyright.com <customercare@copyright.com>
Sent: Wednesday, February 18, 2015 10:46 AM
To: Johnson, Jan
Cc: drivingmsjj@aol.com
Subject: Use of Francoys Gagné Chart From "Gifted Child Quarterly" Article ~277562

Dear Jan,

Thank you for contacting Copyright Clearance Center (CCC) about obtaining permission to use a chart from an article written by Francoys Gagné.

The Abstract for the article **Giftedness and Talent: Reexamining a Reexamination of the Definitions** which was published in *Gifted Child Quarterly Summer 1985 vol. 29 no. 3 103-112* is located at http://gcq.sagepub.com/content/29/3/103.short?rss=1&ssource=mfc.

If you bring up th page, you'll find a link to "Request Permissions" to the right of the abstract under **Services**:

Clicking on this link will bring up a RightsLink page where permission from Sage Publications can be requested for use of content from the article.

However, if you select "reuse in a dissertation/thesis" for "I would like to…" and choose "Article non-author" for "Requestor Type", the following message comes up:

> **Gratis**
>
> Permission is granted at no cost for sole use in a Master's Thesis and/or Doctoral Dissertation. Additional permission is also granted for the selection to be included in the printing of said scholarly work as part of UMI's "Books on Demand" program. For any further usage or publication, please contact the publisher.

For your convenience, I've attached a PDF of the page that comes up showing that the message refers to the Gagne article.

So, if the first use of the chart was in this article, you have permission and you can use the attached PDF to show your permission. If the chart, however, was used in a previous article, you have to base your permission request on the original use.

I hope this helps you. If you have other questions, you can reach the first available CCC Customer Service Representative by calling 855-239-3415 (3 AM to 6 PM Eastern Time), by using our online chat function during the same hours (http://chat.copyright.com) or by sending email to info@copyright.com.

Best wishes to you on your dissertation and beyond.

Kind regards,
Phyllis

Phyllis Shapiro
Lead Customer Account Specialist
Copyright Clearance Center
222 Rosewood Drive
Danvers, MA 01923 USA
+1-855-239-3415 Toll Free
+1-978-646-8600 Fax
www.copyright.com

Appendix F: Permission Clearance

From: Academic Journals Society Permissions
Sent: 19 December 2014 10:59
To: 'Drivingmsjj@aol.com'
Subject: FW: chas20:Motivation within the DMGT 2.0 framework

Our Ref: MD/CHAS/P2805

19th December 2014

Dear Jan D Johnson,

Thank you for your correspondence requesting permission to reproduce the following material from our Journal in your printed thesis and to be posted in your university's repository Liberty University.

Figure 1 from ' Motivation within the DGMT 2.0 Framework' B Francoys Gagne High Ability Studies Vol.21:2 (2010) pp.81-99

We will be pleased to grant entirely free permission on the condition that you acknowledge the original source of publication and insert a reference to the Journal's web site:

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Thank you for your interest in our Journal.

Yours sincerely

Michelle Dickson – Permissions & Licensing Executive, Journals.

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Fax:+44 (0)20 7017 6336
Web: www.tandfonline.com
e-mail: Michelle.Dickson@tandf.co.uk

Appendix G: Additional County A Data

According to the statistics reported in 2010 (Education Bug, 2012; School Digger, 2012; NCDPI, 2013), the population of County A was 35,190. The ethnic distribution was: (a) 60.5 % Native American, (b) 35% African American, (c) 7.3% Hispanic, and (d) 2.7% Caucasian. Approximately 4.6% of the population was considered foreign born, and 6% of the population, ages 5 and older spoke a language other than English within the home. About 40.2 people lived per square, and the total land area was 874.33 square miles (U.S. Census Bureau, 2010). A total of 10 schools are in County A: (a) seven elementary schools, (b) four middle schools, and (c) two high schools. The total population of all 7 elementary schools was 2,036. Of the students, 85% or 1,734 students received free lunch, and 7% or 143 students received reduced lunch (see Table 2).

The utilization of traditional and non-traditional/alternative identification criteria for placement of GT students in the program was documented for County A in the AIG Plan for 2012-2013 (NCDPI, 2013). Multiple criteria were used for the identification of students who were accepted for placement in the GT programs. The purpose was to reach a wide range of students who might be overlooked in the identification process. The screening process addressed the needs of the traditionally underrepresented populations such as: (a) English language learners (ELLs), (b) culturally and ethnically diverse, (c) twice exceptional, (d) economically disadvantaged, and (e) highly gifted. The staff of the AIG program of County A used alternative assessments for GT attributes: (a) the Cognitive Abilities Test (CogAT; Lohman, 1989); (b) the Naglieri Nonverbal Ability Test (Naglieri, 2004); or (c) the Otis Lennon School Ability Test (Otis & Lennon, 1977, all cited in NCDPI, 2013). The following assessments were used for student achievement: (a) the NC End of Grade Test (North Carolina Testing Center, 2006); (b) the Woodcock-Johnson Test of Achievement (Woodcock & Johnson, 1977); (c) the Metropolitan Achievement Test (Harcourt, 2000); as well as (d) class grades (all cited in NCDPI, 2013).

Appendix H: Additional County B Data

The total population of County B was 324,049 (Education Bug, 2012; School Digger, 2012). County B was comprised of the following ethnicities: (a) Caucasian 53.7%, (b) African American 37.4%, (c) Hispanic 10.2%, and (d) Native Americans 1.7%. Also, 5.9% were recognized as foreign born, and 11% of people, ages five and older, spoke a language other than English within the home. The land area for this county was 652.32 square miles, and approximately 489.7 people lived per square mile. In County B, there were a total of 106 schools: (a) 72 elementary, (b) 20 middle schools, and (c) 14 high schools. The total population of the 53 elementary schools was 42,826 students of who 2,707 (6.3%) of the students received free lunch and 1,948 (4.5%) received reduced lunch (NCDPI, 2013; see Table 2).

Clear and comprehensive indicators in various combinations were used to identify gifted students or those who needed differentiated services beyond those offered within the regular classrooms of County B, as indicated in the AIG Plan 2010-2013 (NCDPI, 2013). Multiple screening information was utilized from various sources. Students were identified and placed, when they met specific criteria through either of two Pathways. There were opportunities for students to qualify for the GT programs in either reading or mathematics through use of either Pathway. The primary components of Pathway One Identification were: (a) academic performance, (b) traditional aptitude, and (c) achievement scores. The use of Pathway Two allowed for the administration of non-traditional assessments, such as the nationally normed Naglieri (i.e., non-verbal [Naglieri, 2004 as cited in NCDPI]) instrument and various other academic indicators. The more indicators present, the greater the need for differentiated programs. The screening process addressed the needs of traditionally underrepresented populations: (a) ELLs, (b) culturally and ethnically diverse, (c) twice exceptional, (d) economically disadvantaged, and (e) highly gifted. Additional strategies for the nurture and identification of under-represented populations for the GT programs were being sought within County B.

Appendix I: Additional County C Data

The total population of County C was 279,641 (Education Bug, 2012; School Digger, 2012). The ethnic composition of the population was: (a) Caucasian 53%, (b) African American 38.8%, (c) Hispanic 13.4%, and d) Native American 1%. A total of 14% of the population was considered foreign born, and 19% spoke a language other than English within the home. The land area of County C was 285.98 square miles, and there were 935.7 people per square mile. The total number of schools within County C was 15 schools: (a) nine elementary schools, (b) three middle schools, and (c) three high schools. The total population of the nine elementary schools was 2,995. The total percentage of students who received free and/or reduced meals was 79.8% (Education Bug; NCDPI, 2013; School Digger; U.S. Census, 2010; see Table 2).

The gifted identification procedures, which were used for the GT programs of County C, led to appropriate services for students, because they were comprehensive, equitable, and clear, as specified in the AIG Plan 2010-2013 (NCDPI, 2013). Primarily, the staff of the AIG programs of County C utilized traditional measures, but wrote in the AIG Plan that they would have liked to have explored non-traditional/alternative standardized measures. Because of funding constraints, and the evaluation of their newly implemented K-Two program, the exploration process had been delayed. The screening process addressed the needs of the traditionally underrepresented populations: (a) ELLs, (b) culturally and ethnically diverse, (b) twice exceptional, (c) economically disadvantaged, and (d) highly gifted. The development of a plan to increase the underrepresented populations of gifted learners was being sought by the AIG staff of County C. Multiple Assessment Combinations of criteria were used in the AIG programs of County C, where students were required to achieve in three of four in the following areas: (a) achievement; (b) aptitude; (c) traits, aptitudes, and behaviors (TAB); and the Gifted Rated Scale (GRS; Pfeiffer & Jarosewich, 2003, as cited in NCDPI) to be accepted in the gifted programs.

Appendix J: Additional County D Data

County D had a total population of 50,536 (Education Bug, 2012; School Digger, 2012). The total population consisted of the following ethnicities: (a) Caucasian 50.4%, (b) African American 34.2%, (c) Hispanic 12.4%, and (d) Native American 9.7%. A total of 5.6% of the population was identified as foreign born, and 12% of the population spoke a language other than English within the home. The land area of County D was 390.74 square miles, and 120.2 people lived per square mile. There were 12 schools in County D: (a) eight elementary schools, (b) two middle schools, and (c) two high schools (Education Bug; School Digger; U.S. Census, 2010). The total population of the eight elementary schools was 4,097. There were 2,615 (63.8%) who received free lunches, and 375 (9.1%) students who received lunch at a reduced rate (NCDPI, 2013; see Table 2).

The staff of the AIG program of County D, according to the 2010-2013 AIG (NCDPI, 2013), utilized a variety of indicators for giftedness which enabled the school-based Gifted Identification Team to be responsive to the characteristics of multicultural and disadvantaged students. According to the Gifted Plan, the AIG program of County D utilized both traditional and non-traditional standardized criteria for the identification of students for gifted programs. Within the plan, it was reported that students were not denied appropriate services based on one source of data (NCDPI, 2013). The screening process addressed the needs of the traditionally underrepresented populations: (a) ELLs, (b) culturally and ethnically diverse, (c) twice exceptional, (d) economically disadvantaged, and (e) highly gifted. Alternate achievement and cognitive ability assessments could be utilized contingent upon the demographics of the LEA: (a) Spanish version of Woodcock-Johnson (Woodcock & Johnson, 1977) or English version with an interpreter; (b) the Naglieri Nonverbal Ability Test (Naglieri, 2004); (c) the Wechsler Individual Achievement Test (WIAT; Wechsler, 2005); and/or (d) the Gifted Rating Scales (GRS; Pfeiffer & Jarosewich, 2003, all cited in NCDPI, 2013). In the AIG program of County D, the staff utilized four Pathways, which were comprised of varying gifted identification criteria.

Appendix K: Additional County E Data

The total population of County E was 95,708 (Education Bug, 2012; School Digger, 2012). The population was comprised of several ethnic groups: (a) Caucasian 58%, (b) African American 38.4%, (c) Hispanic 6.5%, and (d) Native American 0.9%. Approximately 4.8% of the population was considered foreign born, and 7.4% of the families spoke a language other than English from the ages of five and above. The land mass of this county was 540.41 square miles, with 177.3 people per square mile. County E has of a total of 29 schools: (a) 16 elementary schools, (b) five middle schools, and (c) eight high schools (Education Bug; School Digger; U.S. Census, 2010). The total population of the 22 elementary schools was 7,617, 69.6% of who received free and/or reduced lunches (NCDPI, 2013; see Table 2).

Multiple criteria were used to identify students for the gifted programs of County E (Education Bug, 2012; School Digger, 2012). In a concerted effort to create a comprehensive student profile, the staff of the AIG program examined student: (a) aptitude, (b) achievement, and/or (c) potential to achieve. According to the 2010-2013 AIG Plan, the identification criteria were: (a) observations, (b) performance, (c) aptitude, and (d) achievement. Traditional and nontraditional, quantitative and qualitative measures were utilized in the gifted identification process (NCDPI, 2013). A percentile score of 90 was required on the aptitude or ability assessment for both verbal and nonverbal areas. A score of 90% was required on the norm referenced achievement assessments in reading/language arts and/or mathematics. Learning, adaptability, creativity, and leadership were the characteristics that were assessed on teacher rating scales. Portfolios which reflected exceptional above grade level work were also considered for identification of gifted potential. A percentile score of 90 or above was required on both the aptitude and achievement assessments; however, if the 90th percentile was achieved in only one area, it was necessary that all other identification criteria were reflective of exceptional evidence for gifted services. The AIG program staff utilized: (a) screening, (b) referral, and (c) identification assessment instruments, which were responsive to traditionally underrepresented populations. Based on the County E gifted identification data results, there was a need to educate teachers about the characteristics of giftedness in all populations, including traits which masked gifted behaviors.

Appendix L: Additional County F Data

The total population of County F was 59,715 (Education Bug, 2012; School Digger, 2012). The population was comprised of the following ethnicities: (a) Caucasian 75.4 %, (b) African American 20.3%, (c) Hispanic 19.4%, and (d) Native American 1.3%. Approximately 11.5% of the population was considered foreign born, and 17.7% of the families spoke a language other than English from ages 5 and above. The land mass of this county was 254.96 square miles, and 227 people lived per square mile. The total number of schools for County F was 14: (a) eight elementary schools, (b) three middle, and (c) three high schools (Education Bug; School Digger; U.S. Census, 2010). The total population of the eight elementary schools was 4,626 with 2,983 students (64.4%) received free meals, and 316 (6.8%) received a reduced rate (NCDPI, 2013; see Table 2).

According to the local 2010-2013 AIG Plan of County F, multiple criteria were utilized in order to identify a student's aptitude, achievement, or achievement potential for participation in the GT programs. According to the plan, the AIG staff of County F administered traditional standardized measures; also, they sought better ways to identify underrepresented populations. The identification headcount of the district indicated that the GT population was not represented proportionately in comparison with the district demographics. The County F district leaders provided training for their teachers to properly identify underrepresented students for participation in gifted programs. Also, these leaders were working toward the alignment of representation of underrepresented populations within the district population. The underrepresented populations included students who were: (a) economically disadvantaged, (b) culturally/ethnically diverse, (c) highly gifted, (d) twice-exceptional, and (e) ELLs (NCDPI, 2013). Although students were formally identified in Grade 4, alternative assessments were used during the gifted screening process for students in Grades 3-12, and they were used when an underrepresented student did not meet the required criteria. The AIG personnel of County F utilized an approved list of formal alternative assessments to measure intelligence and achievement for students identified as gifted. The assessments included: (a) an aptitude test; (b) Test of Cognitive Abilities (CogAT; Lohman, 1989, as cited in NCDPI, 2013); or (c) alternative assessments, depending upon the needs of the students. In addition, they utilized scores from the North Carolina End of Grade, and End of Course (NCEOG/EOC; North Carolina Testing Center, 2006) tests or Iowa Test of Basic Skills (ITBS; Lindquist, Greene, Horn, McBroom & Spitzer, 1935, as cited in NCDPI, 2013) achievement tests. The students were required to attain a mean score of 100, and a standard deviation of 15 on the alternative assessments to be considered for the GT program.