

PRE-SERVICE TEACHERS' KNOWLEDGE AND ATTITUDES TOWARDS INCLUSIVE
TALENT IDENTIFICATION AND DEVELOPMENT PRACTICES
OF UNDERSERVED, LOW-INCOME YOUTH

by

BRITTANY NICOLE ANDERSON

(Under the Direction of Tarek C. Grantham)

ABSTRACT

The purpose of this dissertation was to explore the knowledge and attitudes that pre-service teachers have about high-ability students from different cultural, linguistic, and economic backgrounds. The knowledge and attitudes of teachers were explored using a newly developed instrument, *Inclusive Talent Identification and Development Questionnaire (ITID-Q)*. The study presents the validation process that occurred with the development of ITID-Q, which included a literature review to generate items and identify experts to enlist for the review process. The first study involved instrument development: the expert committee reviewed the questions and provided suggestions on wording, grammar, structure of the questions, and aligning the items to the appropriate construct domain. The experts review did not yield a consensus on domain alignment for items within the following constructs: talent identification, talent development, and historical classifications. The initial pilot-test for the instrument consisted of 125 in-service teachers from the Southwestern United States. The researcher used Confirmatory Factor Analysis as the statistical procedure, however, the analysis failed to converge. The researcher surmised that the failure was due to the smaller sample size (125 participants), as well as the

inability of the Likert scale to capture variability. The second study featured principal component analysis (PCA) as a data reduction method to facilitate instrument development. Through the use of the PCA approach five factors were identified: Historical Perspectives Identification Criteria, Teacher's Lens, Culturally Responsive Student-centered Approaches, Students' Learning Preferences, and Assessment Processes. The 2nd study included an analysis of the response distribution of the items and discusses the issues that can contribute to the underrepresentation of culturally, linguistically, and economically diverse youth in gifted programs. The study is essential because it provides a baseline about teachers' knowledge and attitudes; which answers the question of why underserved students are still under-identified. This dissertation presents a psychological instrument that can assess pre-service teachers' knowledge and attitudes about diverse populations, which may inform the design of teacher preparation programs.

INDEX WORDS: Talent development, Talent identification, Pre-service teachers, Gifted students, Underserved students, Pre-service teacher development, Teacher preparation, Cultural competency

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B.S., Baylor University, 2008

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A Dissertation Submitted to the Graduate Faculty of The University of Georgia in Partial
Fulfillment of the Requirements for the Degree

DOCTOR OF PHILOSOPHY

ATHENS, GEORGIA

2017

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DEDICATION

This dissertation is dedicated to my family. To my mother, who raised me to be a God-fearing woman who refuses to take no as an answer, and one that refuses to let my circumstances overshadow my quest for greatness. Here's to rising out of the shadows, and charging our family onto the path of greatness. This dissertation serves as many firsts for us, and I do not take all of your teaching, critiques, or challenges lightly. Love you, Mama.

To my grandparents and great-grandparents, all your wisdom, laughs, and memories have served me well. Even in your wake, I keep all your sayings and encouragement close to my heart to push forth, and extend the opportunities you all were never granted because of circumstance and environment. I want to make you proud.

To my brother, Christopher, you are one of the reasons why I do this work, and have dedicated myself to changing paradigms in our schools and with teachers. All of your gifts and potential, have not fully been capitalized; continue the journey of finding yourself, maximizing your potential, and being a Black man with purpose. There is no doubt in my mind you have the capabilities. Love you.

To my niece, Brooklyn, you are such a bright star. I vow to be a woman you always look up to, will challenge you, and know you can come to for help in any way.

To all the underserved children across our nation, I dedicate this work and my career to ensuring that you are given the opportunity to demonstrate your strengths and talents in your own way.

ACKNOWLEDGEMENTS

I've learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel.

-Maya Angelou

First and foremost, I would like to thank God, my Savior, for the many gifts He has bestowed in me, and charting a path that I could not have imagined in my wildest dreams. Thank you God for being my peace during this long and tedious journey.

I would like to acknowledge the help of my family for their love and support during this journey. To my Mama and my stepdad, Cleo, thanks for your encouragement and help during this process. A special thanks to my extended family as well; my grandparents, great aunts and uncles, aunts and uncles. It truly takes a village. Love y'all! I'm going to make Groesbeck, Texas proud!

A special thanks to my doctoral committee. My wonderful advisor and chair, Dr. Tarek Grantham, you've mentored me well. A huge thanks for all your support- you challenge me to be my best. Thanks for part in my development as an emerging scholar- your advice, determined spirit, and guidance during this process is something I don't take lightly. Your dedication to this work is unrivaled, and I hope to be a great scholar like you one day! To Dr. Hines, thanks for your nurturing spirit, passion, and help along the way. You're amazing. Thank you Dr. Ferster, I could not have made this happen without your patience, knowledge, and faith in me to complete this quantitative study. Forever grateful, you are one of a kind! Dr. Fields-Smith your encouragement, support, and challenge for me to do more, has pushed me to be great, and to make my mark on the research world.

Lastly, to my dear friends and Sista Scholars, there is no way I could have made it through this journey without you. The love, accountability, and support we have for each other as Black women, is like none other. At times when I wanted to throw in the towel, you all were there pushing me and lifting me up. Our time together will forever be etched into my heart. We will go out in the world and do great things, lifting up the culture and walking in all this MAGIC! I love y'all, and look forward to our future collaborations.

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CHAPTER 1

INTRODUCTION

With increasing diversity, there comes the need to change many school practices, not only in terms of increasing the representation of students of color in gifted education, but also in terms of more effectively meeting the academic needs of students who are gifted and diverse (Ford, Moore, & Harmon, 2005). Gifted children can be found across all cultural groups and at every socioeconomic level; however, attempts to identify them have been and continue to be an issue (Ford, 1995, 2013; Frasier, 1991; Passow & Frasier, 1996; Torrance, 1968, 1972). In the field of gifted education, scholars and practitioners alike have raised awareness of the underrepresentation of culturally and linguistically diverse students and those from low-income households. There is no debate in the field, that the underrepresentation of ethnic minority students in gifted education is a problem; there is an overrepresentation of White and Asian students in gifted and talented programs, while Black and Hispanic students are typically underrepresented. According to Grissom, Rodriguez, & Kern (2015, p.1), “Black students are only 59% as likely to receive gifted services as would be predicted if their gifted participation was proportionate to their presence in the broader student population.”

Because the needs and characteristics exhibited by African American and other historically underrepresented students are not the traditional needs and characteristics studied, understood, and accepted, their intellectual, academic, socio-emotional, psychological and cultural differences are rarely considered and met (Scott, 2012). Numerous factors contribute to the challenges that African American children face that prevent them from fully demonstrating

their intellect (Barton & Coley, 2009). These social historical factors may lead to the development of low self-esteem and the expectation of failure (Scott, 2012). Fordham and Ogbu (1986) found that African American students who do well in school often face negative peer pressure. The researchers asserted that these students "experience inordinate ambivalence and affective dissonance in regard to academic effort and success" (p. 177). Some underserved students may experience difficulty with racial identity development, which could eventually lead to conflicts between academic and social self-concepts and cause these students to experience a myriad of emotions and underachieve (Scott, 2012). With so many adverse barriers affecting low-income, underserved students, there is a great need to focus on the talent development of this group, as well as the social-emotional affects and experiences of these youth.

Students from low-income households typically do not have access to enriching learning activities at home and school (Barton, 2003), which in turn contributes to underachievement and underrepresentation (Ford, 1995). With the majority of children in low-income families being children of color, particularly Black and Hispanic students, these students face the additional burden of racial discrimination (Kitano, 2007). Recognizing gifted eligibility for these students using traditional intelligence measures may not allow for their abilities or talents to be captured. For educators working with low-income students, it is of great importance that we approach identification from a strengths-based perspective rather than a deficit one, including appropriate assessments for identification (Ford & Grantham, 2003). Research does not support the notion that any one group is more intelligent than another (Renzulli, 2004), therefore, why are there so many underserved students unidentified and unrecognized as talented individuals in our Nation's classrooms?

Identifying potential and talent in low-income, underserved populations has been a concern in gifted education for decades. Much of the literature around low-income gifted and talented students presents a broad spectrum: risks of underachievement, blanket policies, issues with identification (eligibility and assessment measures), funding disparities, and types of interventions that have shown to be effective in meeting the needs of underserved students. Moreover, too often in the gifted education literature, the characteristics of low-income students are often overgeneralized and viewed as monolithic in nature. This unfocused view does not take into account how income intersects with culture, geographic location, family values, and the larger society. Challenges facing today's low income, urban and rural schools, have both *structural* and *cultural* components. Structural challenges are those specific school policies and practices that impede student success or fail to adequately address students' needs (Noguera, 2003). Key structural issues in these districts include consistently low student achievement, lack of instructional coherence, inexperienced teaching staff, poor functioning business operations, and low expectations of students (Ford, 1998; Kincheloe, 2004). Cultural challenges include policies, practices, and sets of beliefs that contribute to dysfunctional perceptions of students' intellectual abilities, specifically for culturally and linguistically diverse students (Ahram, Stembridge, Fergus & Noguera, 2003).

Due to the structural and cultural challenges that occur in many Title I schools, many schools with high percentages of children from low-income families that receive federal funds to help students meet academic standards, the primary concern amongst teachers and administrators has been centered on raising the achievement of the lowest performing students. That is, they are focused on closing the achievement gap among subpopulations, at the basic level, rather than developing the talent of all youth they serve. It has been suggested that the focus on basic levels

of competency and increased attention on raising the achievement of low performing students may indirectly affect the growth of higher achieving students (Olszewski-Kubilius & Clarenbach, 2012). Due to the fact that a teacher's time and attention, our most critical educational resource, has been solely focused on struggling students (Olszewski-Kubilius & Clarenbach, 2012), we are faced with missing the mark on developing students with talent and high potential. It has also been suggested that focusing on basic levels of cultural competence, while simultaneously raising expectations for achievement for low performing students, may indirectly affect their academic growth in school (Ford & Whiting, 2008).

Identifying the factors contributing to the underrepresentation of culturally and linguistically diverse students in gifted programs, continues to stymie educators, administrators, and practitioners. Various solutions have been proposed and discussed (Renzulli, 2004), yet there is limited research on implementing these solutions and observing the effects. Manifestations of talent vary depending on the culture, socioeconomic status, and language used by students (Frasier, 1997). Some students readily demonstrate their gifts, but for others, the demonstration of their gifts and talents may not be recognized in a traditional sense or easily observed (Ford, 2013). The intersections of contextual influences such as economic status, culture, and language impact learning and how we perceive our students. Without proper training or awareness of how contextual influences impact learning, teachers and counselors may potentially overlook students who are truly gifted. If educators continue to exclude contextual factors from the equation of identifying students, underrepresentation of culturally, linguistically, and economically diverse students will continue to persist.

Several educators and researchers have long debated at what point do we begin to address these concerns within specific populations (Banks & Banks, 2003; Ladson-Billings, 1995, 2011;

Irvine, 1991). However, one must question, where did the struggle began for most teachers and how should it be addressed? Are we doing enough in teacher preparation programs to equip pre-service teachers with pedagogical tools to educate low income, high-ability students from culturally and ethnically diverse backgrounds? What do our pre-service teachers know about talent identification and talent development practices? Also, how can we equip them with the knowledge and skills to meet the needs of this very important and often overlooked population?

Background of the Problem

The goal of most education preparation programs has been to develop future teachers, administrators, and specialists to meet the needs of our increasingly diverse population (Ladson-Billings, 1995). Throughout our nation, teacher education programs have concentrated their efforts at reforming their programs in order to address social justice and equity (Ladson-Billings, 1995). In the field of gifted education, scholars and practitioners alike have raised awareness of the underrepresentation of culturally and linguistically diverse students and particularly those from low-income households. Although there is a bevy of information on the needs of culturally and linguistically diverse gifted students, there is little being done with pre-service teachers to adequately prepare them to meet the needs of high-ability learners in general, and certainly not with underserved students (Feldhusen & Kolloff, 1986; VanTassel-Baska, 2003). Pre-service teachers are not required to take courses or receive training in gifted education (VanTassel-Baska, 2003), and typically receive limited training in multicultural education (Cochran-Smith, 2004; Milner, 2010; Sleeter, 2013). In many cases, pre-service teachers have not had the chance to explore the many applications of multicultural theory in an educational setting (Milner, 2010). One area that is commonly neglected is talent identification/development of culturally, linguistically, and racially diverse students. This limited, and typically lack of exposure to the talent development of culturally different students, is not helpful in preparing future teachers to

adequately meet the needs of high-performing students, whose gifts and talents manifest in ways that seemingly do not fit mainstream standards. As our nation becomes more diverse, there are adaptations that need to be made in pre-service teacher programs in regard to our diverse, talented, and growing low-income population. It is important to address the implications of poverty: how it affects students in their manifestations of talent and how it impedes teachers in their identification of gifted students.

In a report conducted by the National Center for Education Statistics (2013), 51% of students across the nation's public schools were low-income, for the first time in recent history. The percentages of students in low-poverty and high-poverty schools varied by race/ethnicity, and the numbers of low-income students attending public schools in the South and in the West are extraordinarily high. Authors of the Southern Education Foundation's (2015) report concluded:

No longer can we consider the problems and needs of low-income students simply a matter of fairness... Their success or failure in the public schools will determine the entire body of human capital and educational potential that the nation will possess in the future. Without improving the educational support that the nation provides its low-income students- students with the largest needs and usually least support--- the trends of the last decade will be the prologue for a nation not at risk, but a nation in decline. (p. 4)

Poverty is not a novel contemporary issue to tackle in our schools but a recursive one. Addressing the underrepresentation of culturally and linguistically diverse students in gifted education may be a needed driving force to root out cultural prejudice. It is imperative that we meet the needs of low-income gifted students by means of identification, programming, and sustainability. Specifically, African American students living in poverty are less likely to be

identified for gifted services or to have access to an equitable gifted program (Borland, 2004; Ford, 1998; Latz & Adams, 2011). Being an underserved student in a low-income school proves challenging on several levels: basic resources, teacher turnover, and weak community support combine to mute talent development and obscure pathways to success.

Empirical research on the preparation of teachers for culturally responsive pedagogy is limited and consists mostly of case studies (Sleeter, 2013). Many of the case studies center on preparation, bringing attention to problems and barriers educators' experience, and studies demonstrating how problems and barriers can be addressed. Typically, in teacher education programs, both traditional and nontraditional, there are substantial challenges in preparing early professionals to meet the needs of culturally diverse students in a critical and relevant manner (Baldwin & Baldwin, 2005; Borland, 2004; Frasier, 1997; Ford, 2011). Numerous case studies of teachers learning culturally responsive pedagogy explore the impact of specific kinds of pre-service and professional development programs, through either school-university partnerships (Bales & Safford, 2011), inquiry-based courses (Jennings & Smith, 2002), teacher networks (El-Haj, 2003), community-based learning (Fickel, 2005), or sustained workshops combined with classroom-based coaching (Kozakiewicz & Rodriguez, 2007). Most of these studies concluded that there is a great need for more education and training on culturally relevant strategies, pedagogy, and methodology. There is a need for more systematic research that links culturally relevant pedagogy to student impact, as well as more research that connects teacher professional development in culturally responsive pedagogy with improved student learning (Sleeter, 2013).

There is a resounding theme underlying the problems facing our schools and preparation programs: a lack of adequate training. This lack of training calls for (a) culturally relevant pedagogical practices, (b) reflection on the attitudes associated with deficit thinking, (c)

understanding implications of poverty, and (d) overall knowledge of inclusive practices aligned with talent identification and development.

Statement of the problem

Despite the litany of information on the inclusive criteria for identifying and fostering the talent of high-ability students in underserved schools, researchers and scholars do not know the attitudes, knowledge, and ability levels (readiness) of pre-service teachers before they enter the classroom.

Purpose of the Study

The purpose of this dissertation is to determine pre-service teachers' knowledge of the appropriate talent identification and talent development strategies to use when working with low-income, underserved youth. The following questions will be explored through this study:

1. How do gifted experts define “best inclusive diversity practice” for low-income, high-ability youth?
2. To what extent do teachers' views on “best inclusive practice” reveal about their knowledge and attitudes towards high-ability, underserved youth?
3. To what extent is a teacher's personal characteristics predictive of their support of diversity and inclusion of underserved students in gifted education?

Overview of the studies

Educational researchers and scholars have outlined several issues related to the educational outcomes of culturally and linguistically different students, specifically African Americans, Hispanics Americans, and American Indians. The concerns of culturally and linguistically diverse students include but are not limited to (a) high dropout rates; (b) high suspension and expulsion rates; (c) high rates of school failure, low test scores and

underachievement; (d) low academic engagement, poor student-teacher relationships; and (e) the lack of culturally relevant curricular materials and strategies (Ford & Kea, 2009). Ford and Kea (2009) categorized these issues into three broad categories: (a) the achievement gap, (b) gifted education underrepresentation, and (c) special education overrepresentation (p. 1). For each of these broad categories the lack of appropriate and culturally competent teacher training is a reverberating issue that relates to the educational outcomes of culturally and linguistically different students. In the following studies, I chose to focus my attention on where the problem of appropriate training and educational development began, pre-service teacher preparatory programs.

Significance to the field of gifted education

Gifted children can be found in all cultural groups and at every socioeconomic level, however, attempts to identify them have been and continue to be an issue (Ford, 1995, 2013; Frasier, 1991; Passow & Frasier, 1996; Torrance, 1968, 1972). This dissertation seeks to identify the extent to which pre-service teachers believe they will do the “right” things in order to identify and develop the talent of underserved youth. Understanding how pre-service teachers identify gifted characteristics and thereby cultivate the talent of low-income, underserved students, can potentially inform teacher preparation training and programming. This study will provide an assessment instrument gaging their procedural knowledge. Most teacher preparation programs have the goal of preparing culturally competent teachers, but this should be coupled with meeting the needs of those who are academically talented. Culturally competent educators have an understanding about students’ culture, cultural values, and academic needs, thus if educators have this training before entering the classroom, it may alleviate underrepresentation of marginalized students in gifted education. Adapting teacher preparation programs to better equip

students to enter the field with a general understanding of common traits, aptitudes, and behaviors of minorities (that is, students who are minoritized) could serve our educational system well, due to the fact that many students from poverty are overlooked and underdeveloped (Ford, 2007; Ford, Grantham, & Whiting, 2008; VanTassel-Baska, 2003; VanTassel-Baska & Stambaugh, 2007).

Issues of underrepresentation are ever present in our schools, and in order to create pathways of success for our teachers, we must begin to properly train our pre-service teachers on inclusive talent development practices. In order to properly train our pre-service teachers on inclusive talent identification and talent development practices, we must first inform, and then equip them with culturally responsive tools and methodological practices to make instruction relevant. Granted that teacher certification programs cannot give future educators all the information they need before entering classrooms, we must structure our programs to provide authentic and relevant field experiences and applications to meet the needs of our changing demographics. If we do a better job of equipping our pre-service teachers with pedagogical tools to meet the needs of underserved youth, we can potentially create a pipeline of teachers with social-justice agendas who can identify, recruit, and train culturally, linguistically, and racially different students for gifted education programs. The purpose of this dissertation is to provide information concerning pre-service teachers; the results from this study could help with the issues of underrepresentation of culturally, linguistically, and economically disadvantaged students and school policies. We have to create the right climate for talent development to be identified and fostered. Pre-service teachers must be socialized to realize that giftedness manifests differently in underserved populations and to recognize their role in the process of identifying and serving these students.

Research design outline

In order to address the research questions two separate studies were carried out. The first study concerned the validation of a questionnaire by experts in the field of gifted education who specialize in underserved populations, specifically racially and culturally diverse students. The second study investigated the knowledge and attitudes of pre-service teachers towards inclusive talent identification practices among low-income youth. This dissertation explored pre-service teachers' individual indicators of diversity (i.e. cultural competence) associated with underserved, high-ability youth using a questionnaire.

Table 1.1

Study 1: Research Design Outline and Approaches

Goal/Study Sequence	
Purpose/Task(s)	Validate the questionnaire by experts in the field of gifted education who specialize in underserved populations, specifically racially and culturally diverse students.
Research Question	1. How do gifted experts define “best inclusive practice” for low-income, high-ability youth?
Elements of the Construct/Research Questions	Content Validity: Historical Classification, Talent Identification, and Talent Development
Methodology/Data Collection Sources	Ford’s (2011) Multicultural Program Evaluation Guidelines and Checklist and Ford and Grantham’s (2003) deficit-oriented attitudes and views instrument. Seven content experts will be identified and contacted through email to participate in the instrument validation. Also, Kane’s content validity argument-approach to instrument development.
Data Analysis	Alignment/Agreement Levels; Use Confirmatory Factor Analysis (CFA) to determine content validity of the questionnaire with experts
Reference(s)	Baldwin & Baldwin, 2005; Ford, 2011; Ford, 2013; Ford &

Grantham, 2003; Ford, Moore & Milner, 2005; Frasier, 1991;
McGee, 2006; Olszewski-Kubilius & Clarenbach, 2012;
Renzulli & Reis, 2012

Table 1.2

Study 2: Research Design Outline and Approaches

Goal/Study Sequence	
Purpose/Task(s)	Investigate the knowledge and attitudes of pre-service teachers towards inclusive talent identification practices among low-income underserved youth. Using a questionnaire, this study will explore teachers' individual indicators of diversity associated with underserved, high-ability youth.
Research Questions	2. To what extent do teachers' views on "best inclusive practice" reveal about their knowledge and attitudes towards high-ability, underserved youth? 3. To what extent is a teacher's personal characteristics predictive of their support of diversity and inclusion of underserved students in gifted education?
Elements of the Construct/Research Questions	(a) assessment, (b) attitudes associated with deficit thinking, (c) culturally competent teaching and practices, and (d) referral practices
Methodology/Data Collection Sources	In-service teachers & pre-service teachers enrolled in a college course: 2130
Data Analysis	Principal Component Analysis
Reference(s)	Ford, 2011; Gagne, 2004; Hansen & Feldhusen, 1994; VanTassel-Baska, 2001, 2004

CHAPTER 2
THE OPERATIONALIZATION OF THE CULTURALLY READY GIFTED
EDUCATOR: A REVIEW OF LITERATURE¹

¹ Anderson, B. N. *To be submitted to the Interdisciplinary Journal of Teaching and Learning*

Abstract

This review of literature provided a summarization of culturally responsive pedagogy in multicultural and gifted education. It presented an overview of pre-service teacher education programs and the challenges they faced addressing diversity and special education issues within their curriculums. The review explored identification issues for underserved youth who sought to enter gifted education programs. There are many factors that contribute to underrepresentation in gifted programs, primary is the lack of understanding among pre-service teachers on how to development a culturally responsive approach to recognizing giftedness. The review suggests a need for a research instrument aimed at exploring the knowledge and attitudes of pre-service teachers towards low-income, underserved youth. A questionnaire was developed to assess teacher recognition of giftedness; it has gone through a process of validation by experts in the field.

Keywords: pre-service teachers, talent development, talent identification, culturally responsive pedagogy, underrepresentation in gifted education, questionnaire development

Introduction

It is virtually impossible for teachers to succeed with all students, from all circumstances, within all contexts they instruct. Nonetheless, an important challenge is to explore how both students' and teachers' learning experiences are influenced by language, culture, and context. The realities of race and class privileges in the United States, the recursive manifestations of institutional racism, and the numerous factors that shape students' opportunities to learn in classrooms affect everyone (Darling-Hammond, 2011, p. ix). In more than 90% of states, classroom teachers participate in identification processes concerning students (Adderholt-Elliott, Algozzine, Algozzine, & Haney, 1991). Teacher referrals bear heavily on whether programs eventually include low-income and minority students, and teachers often act as "gatekeepers" to gifted programs (McBee, 2006). Underserved students may not be recognized for their abilities during initial screening procedures, which are likely to include cut-off scores on a standardized achievement battery or on an intelligence test (Ford, 2011; Frasier, 1997; Maker, 1996; Renzulli, 2004). As Renzulli and Reis (2012) assert, people not instruments make decisions; instruments will only provide selected sources to make decisions (p. 29). Therefore, it is essential for members from different areas of the school community to orient themselves on protocols for identification (Renzulli & Reis, 2012), characteristics of mainstream and nontraditional giftedness, as well as how contextual influences such as poverty affect the display of talents from low-income students (Ford, 2011).

Defining Poverty in Schools

Poverty is a complex, multidimensional phenomenon. Despite *low-income* and *poverty* being latent, foundational constructs to educational and social science research, measuring and defining poverty continues to present challenges (Sirin, 2005). The United States Census Bureau

uses a set of income thresholds (that vary by family size and compensation) in order to determine who lives in poverty (United States Census Bureau, 2015). This traditional definition does not account for a government programs and/or assistance (Cross, & Dockery, 2014). In most studies, a family's eligibility for free or reduced lunch has been used as a proxy of poverty.

With such a high percentage of students being classified as low-income, it is paramount that we discuss and address how this affects our schools. *High-poverty* schools are characterized as schools where 76-100% of students are eligible for free or reduced-price lunch (FRPL) through the National School Lunch Program (NSLP), and *low-poverty* schools are those where 0-25% of students are eligible for free/reduced lunch (NCES, 2010). According to NCES (2015), the distribution of schools at different poverty concentrations varied by school locale (city, suburb, town, or rural). In school year 2012-2013, approximately 40% of students attending city schools were classified as high-poverty schools (NCES, 2015, p. 111). This number is drastically higher when compared to the 14% of students attending rural schools, and 17% of students attending suburban schools, and 19% of students attending town schools (NCES, 2015, p. 111). Of those attending high-poverty schools, African American and Hispanic American students represented the majority, with each group accounting for approximately 45% of students (NCES, 2015).

The typology of high-poverty schools are generally regular or traditional schools, but there is a larger percentage of special education and alternative schools compared to low-poverty schools (NCES, 2010). According to National Center for Educational Statistics (2010), among high-poverty secondary schools, 73% were classified as regular schools, 22% were alternative schools, 4% were special education schools, and 2% were vocational schools (schools that provide technical or career training). Among low-poverty secondary schools, about 83% were

classified as regular schools, 14% were alternative schools, 2% were vocational schools, and 1% were special education schools (NCES, 2010, p. 41). In 2007-2008, high-poverty schools employed majority female teachers; of those employed, 62% of teachers were White, 16% were Black, and 18% were Hispanic (NCES, 2010, p. 48). The United States National Board for Professional Teaching Standards has drawn attention to the critical importance of equipping teachers with the necessary pedagogical skills to meet the globally shifting demands resulting from the increasing cultural diversity of students (Hamsa, 1998). With such a large majority of Black and Hispanic students attending high-poverty schools, it is vital that we address their needs, as well as how to adequately prepare majority White female teachers to understand the culture, challenges of poverty, and academic needs of students.

A number of researchers have found persistent and substantial inequities in the education received by racially and culturally different students (Darling-Hammond, 1995; Ford, 1998; Gay, 1972; Irvine, 1991; Kozal, 1992; Ladson-Billings, 1991). Challenges facing today's low income, urban and rural schools, have both structural and cultural components. Structural challenges are those specific school policies and practices that impede student success or fail to adequately address students' needs (Noguera, 2003). Key structural issues in these districts include (a) persistently low student achievement, (b) lack of instructional coherence, (c) inexperienced teaching staff, (d) poor functioning business operations, and (e) low expectations of students (Ford, 1998; Kincheloe, 2004). Cultural challenges include policies, practices, and sets of beliefs that contribute to dysfunctional perceptions of students' intellectual abilities, specifically for culturally and linguistically diverse students (Ahram, Stembridge, Fergus & Noguera, 2003).

Due to these structural and cultural dysfunctions that occur in many Title I schools, the primary concern amongst teachers and administrators has centered on raising the achievement of

the lowest performing students and closing the achievement gap among subpopulations, at the basic level, rather than developing the talent of all youth they serve (Olszewski-Kubilius & Clarenbach, 2012). It has been suggested that the focus on basic levels of competency and increased attention on raising the achievement of low performing students may indirectly affect the growth of higher achieving students (Olszewski-Kubilius & Clarenbach, 2012).

Focus on School Personnel. To expand on the structural challenges that affect our nation's high-poverty schools, is the lesser qualifications of personnel of those in low-poverty schools; lesser-qualified teachers who are inexperienced, and typically assigned to teach in areas outside their fields, teach poor, nonwhite students (Cochran-Smith & Fries, 2011; Lankford, Loeb, & Wyckoff, 2002). Not only are teachers lesser-qualified in high-poverty schools, teachers in these settings are 50% more likely to leave than in low-poverty schools (Ingersoll, 2003). These statistics in turn lead to inequality in student achievement, and unequal access to experienced and highly qualified teachers is a "major factor in the stratification of educational opportunity" (Ingersoll, 2004, p. 4). Although No Child Left Behind (NCLB) required that states ensure students from low-income communities were not disproportionately taught by inexperienced and unqualified teachers, the overall outcome of this requirement did not create significant change (Almy & Theokas, 2010). According to the U.S. Department of Education (2010), students in high-poverty secondary schools, are almost twice as likely to have an out-of-field teacher when compared to low-poverty schools. In terms of teacher experience in high-poverty schools, teachers with weaker credentials are disproportionately teaching students, specifically first-year teachers. First-year teachers are assigned to teach students in high-poverty schools at a higher rate than other students attending low-poverty schools (Clotfelter, Ladd, & Vigdor, 2006).

Low SES and gifted education. The literature surrounding low-income gifted and talented students has explored (a) the risk of underachievement, (b) issues with identification (eligibility and assessment measures), (c) funding disparities, and (d) types of interventions that have shown effectiveness in meeting the needs of underserved students (Ford, 1998; Frasier et al., 1995; Renzulli, 2005). However, too often in the gifted education literature, the characteristics of low-income students are often overgeneralized and viewed as monolithic in nature. This oversimplified view does not take into account how income intersects with culture, geographic location, family values, and the larger society (Baldwin, 2007; Ford, 2011, 2013). Educational experiences, teacher expectations, and quality of instruction have a profound effect on the overall achievement of students.

According to Ford (2007), in high-poverty schools teachers frequently settle for curriculum that is foundational at best, with only the basic elements of content to be learned; holding the assumption that doing more is not feasible, and the mastery of the basics is an important accomplishment. Sampson (2002) found that there were several barriers affecting the development of talents among children of poverty: (a) inadequate resources, both financial and in terms of personnel; (b) lack of sustained commitment; and (c) an attitude of “one size fits all” in programming. Worrell (2007) posited that:

Students’ academic self-efficacy is affected by their teachers’ perceptions, but may also be affected by the view that society convey to students about their competence. Negative communications about competence and the ability to be successful in academic tasks are much more likely to be communicated to students from low SES backgrounds than their affluent peers. (p.48)

Therefore, it takes a comprehensive approach to understand how a students' cultural background, the curriculum, and our own beliefs regarding student success impact our assessment of a student's performance. It is of vital importance that our educational settings mirror these same concerns in order to address issues of underrepresentation.

Issues of Underrepresentation in Gifted Education

Identifying factors contributing to the underrepresentation of culturally and linguistically diverse students continues to stymie educators, administrators, and practitioners. Every report and empirical study that centered on gifted education demographics revealed the disturbing finding that Black and Hispanic students are disproportionately underrepresented in gifted education (Ford, 2012). Gifted children can be found across all cultural groups and at every socioeconomic level; however, attempts to identify them have been and continue to be an issue (Ford, 1995, 2013; Frasier, 1991; Passow & Frasier, 1996; Torrance, 1968, 1972). Underserved students, particularly African American, economically disadvantaged students, and underachievers are significantly underrepresented in gifted programs, but are sorely overrepresented in special education programs for the learning disabled, behaviorally disordered, and mentally retarded (Ford, 1995).

Factors associated with underrepresentation. Ford (1995) and Frasier (1997) provided several reasons to explain the lack of representation of underserved students in gifted education. The following section will outline Ford's (1995) research and explanations for underrepresentation, as well as Frasier's (1997) summarization of problems with identification, utilizing the Four A's framework (Access, Assessment, Accommodations, Attitudes).

Frasier's Four A's. Frasier's (1997) Four A's framework (that is, Attitude, Access, Assessment, and Accommodations) serve as a foundation to counter concerns of inequitable practices within a district.

Attitude. Altering attitudes is by far the most crucial component of Frasier's framework (Grantham, 2002). Attitude refers to the mental position, feeling or emotion towards a low-income or culturally, linguistically, diverse (CLD) student. Operating under the perspective that students from low-income homes lack talent is problematic and demonstrative of deficit thinking. In order for educators to truly recognize the potential of low-income students, combating assumptions and stereotypes about low-income communities and the families is an absolute must. According to Frasier (1997, p. 501) "The most pervasive reasons for problems in identifying gifted minority students are related to attitudes about gifted potential in these groups." Through Dr. Frasier's research with the National Research Center for Gifted Education, she found that even with all the issues of access, assessment, and accommodations, there are far more difficult problems related to the attitudes of how gifted students are identified (Frasier, 1997). Demonstrations of potential such as humor, creativity, reasoning, and problem solving may be revealed in a positive or negative manner in low-income students. It is of great importance that negative displays of potential not be overlooked. The manifestation of talent in underrepresented students from low-income and CLD backgrounds will more than likely differ than that of White and middle-class populations. Remaining open and flexible is key as potential manifests in different ways. To promote equitable classrooms and programming, it is imperative to focus on the strengths of students.

Access. Recognizing gifted potential among underrepresented groups does not happen in a vacuum; several factors must intersect in order for students to develop their talent, and it begins

with prioritizing access for all students to appropriately challenging and engaging learning opportunities. Frasier (1997) posited that there are several factors that limit access of low-income and CLD students for gifted programming and services: (a) low academic expectations held by educators and others; (b) low rates of referrals; (c) the inability for educators to recognize gifted behaviors when exhibited by low-income and CLD students; and (d) the lack of regard given to the influence of culture and environment on the manifestations of gifts and talents in different racial and ethnic groups and the effects this has on teacher referrals in the identification process.

Assessment. Expanding access to gifted programs and services is intimately linked to the way in which student abilities and talents are evaluated and identified through the assessment process. A high-quality program should institute multiple criteria (e.g., creativity, leadership, achievement, mental ability, and motivation), multiple measures to assess each criterion, and multiple pathways to determine eligibility for gifted program participation (Frasier, 1997). The tests used for gifted identification and services have been widely criticized and blamed for the underrepresentation of culturally, linguistically, and ethnically diverse students.

Accommodations. Accommodations are the program design and curriculum experiences to support the needs of low-income and CLD students (Frasier, 1997), by way of creating opportunities for students to demonstrate and develop their potential. Stimulating, engaging classrooms and programs where students have the opportunity to explore, take risks, problem solve, and think critically provides the necessary accommodations for students to be considered for gifted programming. In order to cultivate a school climate that embodies the aforementioned traits, the administrators and teachers must subscribe to the school-wide initiatives, and should include culturally relevant curriculum and alternative programming. Educators can advocate for

district-wide initiatives that have a focus on achievement, rigor and creativity, which can in turn set the precedence of excellence for all students, creating equitable opportunities.

Ford's factors explaining underrepresentation. Ford (2011) provides several reasons to explain the lack of representation of ethnic minorities in gifted education. These factors in the underrepresentation equation are as follows: definitions of giftedness, identification practices, cultural differences in learning style, the teacher's role in the recognition of giftedness, parental influence and involvement, and underachievement and giftedness. There is little consensus regarding how best to define giftedness, and most states have a unidimensional perspective on defining giftedness (Ford, 1995). This perspective is harmful, due to the fact it ignores students that do not perform well on paper-pencil tests, cultural biases on standardized tests, learning style differences, and test anxiety (Ford, 1995). To be identified for gifted services, most school districts rely solely on norm-referenced intelligence or achievement tests as the determining factor for student placement in gifted programs (Ford, 1995). This is problematic due to these tests being unidimensional, and several researchers have emphasized the importance of multidimensional, multi-modal assessment strategies (Ford, 1995). The differences in learning styles vary depending on culture; these differences have implications for gifted identification and teaching practices (Ford, 1995).

Ford posits that few teachers have received extensive and continuous preparation in education that is multicultural in scope. As a result, teachers will have difficulty understanding the ways in which culturally and racially diverse groups of students manifest their talents and abilities. Correspondingly, with teachers' lack of understanding of cultural differences, the teacher will fail to recognize potential from culturally and racially diverse groups, which make them unreliable sources. Ford notes that the majority of African American parents favor public

education, but have concerns about the schools' treatment of and influence on their children's learning and development often inhibits participation or presence in formal school settings.

African American parents further mistrust the school system when they learn of the overrepresentation of African American youth in special education program, and because of these concerns, real or perceived, parents fear that their children stand a better chance of being labeled "trouble makers" rather than "gifted" (Ford, 1995, p.56). Lastly, Ford explains that there are several factors that inhibit gifted students from "acting gifted" which inhibit their identification for gifted services. Some capable learners do not perform well on standardized testing, and there is the issue of peer influence. The influence of peer pressure on African American students must also be taken into consideration when accounting for students' performance and achievement efforts.

Other contextual factors. Baldwin (2011) discussed variables such as socioeconomic status, cultural diversity, social and geographic isolation, and relative perception of powerlessness, requires educators to rethink assessment and identification procedures to identify potential across these intervening variables. Contextual influences such as economic status, culture, and language impact learning and how we perceive our students. Some students readily demonstrate their gifts, but for others, the demonstration of their gifts and talents may not be recognized in a traditional sense or easily observed (Ford, 2013). Without proper training or awareness of how contextual influences impact learning, teachers and counselors may potentially overlook students for identification. If educators continue to exclude contextual factors from the equation of identifying students, underrepresentation of culturally, linguistically, and ethnically diverse will continue to persist. Recognizing gifted potential among underrepresented groups does not happen in a vacuum; several factors must intersect in order for students to develop their

talent, and it begins with prioritizing access for all students to appropriately challenging and engaging learning opportunities. Frasier (1997) posited that there are several factors that limit access of low-income and CLD students for gifted programming and services: (a) low academic expectations held by educators and others; (b) low rates of referrals; (c) the inability for educators to recognize gifted behaviors when exhibited by low-income and CLD students; and (d) the lack of regard given to the influence of culture and environment on the manifestations of gifts and talents in different racial and ethnic groups and the effects this has on teacher referrals in the identification process.

Values literature in gifted education. In the book *Gifted and Advanced Black Students in Schools*, Grantham et al., (2011, pp. xiv-xv) provided several propositions regarding the underrepresentation of ethnic minorities, and they established several tenets that the field should hold central to our programming and research:

- Underrepresentation is inequitable and unnecessary.
- All groups are equally endowed in intelligence, academic ability, and creativity; thus, no group should have a monopoly on being identified and served as gifted.
- Underrepresentation can decrease when the focus is on recruitment and retention.
- Teachers and educators (due to low expectations and deficit thinking) are the major contributors to underrepresentation, but substantive and purposeful professional development and courses can change this prejudice.
- Creative strengths reveal gifted potential.
- Traditional tests and instruments are a major contributor to underrepresentation, and alternative tests and instruments can increase Black students' representation.

- Policies and procedures that contribute and sustain underrepresentation must be interrogated and changed.
- Underrepresentation can be corrected.

As mentioned, expanding access to gifted programs and services is intimately linked to the way in which student abilities and talents are evaluated and identified through the assessment process. For decades, gifted education researchers and theorists have supported a broader, expanded conception of giftedness (Gardner, 1983; Renzulli, 1978; Sternberg, 1985; Torrance, 1974, 1977), and very few continue to accept an isolated IQ or achievement test score based on national norms as a valid measure of student's capacity for doing well over the course of a lifetime (Renzulli & Reis, 2012). Nevertheless, in many schools, identification for gifted programs is still heavily tied to performance on intelligence and/or achievement tests (Cross & Dockery, 2014; Renzulli & Reis, 2012). Peterson (1999, p.355) asserts, "If teachers are of the dominant culture, no matter how well intentioned they are, their cultural value orientation may interfere with referring nonmainstream children."

Cultural styles. Passow and Frasier (1996) emphasized: "Talents of minority and economically disadvantaged students are not of a different order nor of a lower standard. By its very nature, any culture or subculture can encourage or inhibit an individual's behavior by the rewards or sanctions it provides (p.199)." Scholars have focused on the values of specific groups in terms of cultural styles and strengths and how these values affect gifted identification (Baldwin, 1978; Ford, 1995, 2011; Frasier, 1991; Passow & Frasier, 1996; Torrance, 1974). Buckley (1992) concluded that schools selected students whose family orientation and conceptions of giftedness concurred with their own: the central categories of IQ, creativity, and motivation. Splinder and Splinder (1990) found that "One's cultural background significantly

influences what one will value, disvalue, and ignore” (p. 68). Ford, Harris, Tyson, and Trotman’s (2002) assert that diverse students are underrepresented in gifted education due to educators’ failure to acknowledge, understand, and affirm cultural differences. Ford, Moore, and Milner (2004) also address value orientations and how these values have an effect in the identification of underrepresented students. Moreover, they encouraged educators to seek extensive preparation in cultural diversity in coursework, professional development, and readings, and in turn understand that this is a lifelong process of being culturally competent. That extensive preparation in cultural diversity and professional development can be explored through the following theoretical perspectives: Culturally Responsive Pedagogy and Gagné’s Differentiated Model of Giftedness and Talent.

Theoretical Perspective: Culturally Responsive Pedagogy

The term *culturally responsive* emerged from the work of Erickson and Mohatt (1982) who suggested that culturally responsive teaching is the initial step in order to bridge the gap between home and school. According to Ladson-Billings (1995b) “culturally responsive referred to more dynamic or synergistic relationship between home/community culture and school culture” (p. 467). Ladson-Billings (1995b) coined Culturally Relevant Pedagogy (CRP) as a “theoretical model that addresses student achievement but also helps students to accept and affirm their cultural identity while developing critical perspectives that challenge inequities that schools (and other institutions) perpetuate” (p. 469). CRP according to Ladson-Billings (1995a) is specifically defined as:

A pedagogy of oppression not unlike critical pedagogy but specifically committed to collective, not merely individual, empowerment. Culturally relevant pedagogy rests on three criteria or prepositions: (a) students must experience academic success; (b) students

must develop and/or maintain cultural competence; and (c) students must develop a critical consciousness through which they challenge the current status quo of the social order. (p. 160)

This pedagogy is an approach for schools to acknowledge home-community culture of individuals, and through this lens establish a framework that is culturally sensitive and integrates cultural experiences, values, and understandings into the teaching and learning environment (Brown-Jeffy & Cooper, 2011). Culturally relevant pedagogy is one that “teaches to and through the strengths of ethnically diverse students” (Gay, 2000, p. 29). This pedagogy also provides a way for students to maintain their cultural integrity and identity while succeeding academically (Ladson-Billings, 1995b). Not only does this pedagogy encourage students to maintain their identity, but also to recognize, understand, and critique current social inequities (Ladson-Billings, 1995b). In order for this conversation and examination to occur in a relevant manner, the educator must too be competent and aware of social inequities and their causes (Ladson-Billings, 1995b).

Original tenets of culturally relevant pedagogy.

Academic success. Within this model, it is of great importance that students develop their academic skills despite social inequities and hostile classroom environments (Ladson-Billings, 1995a). These skills range from technological, social, political, literacy, and numeracy; all skills need to be nurtured and developed, based on student capacity in order for them to be active participants in a democracy (Ladson-Billings, 1995a). Based on a study done by Ladson-Billings with expert teachers of African American students, exhibiting academic competence is a must (Ladson-Billings, 1994). According to Ladson-Billings (1995a), “culturally relevant teaching requires that teachers attend to students’ academic needs, not merely make them “feel good” and to get students to choose academic excellence” (p. 160).

Cultural competence. In order to establish and maintain academic excellence, it is imperative that students maintain some cultural integrity (Ladson-Billings, 1995a). Several studies provided evidence that African American students could not be themselves; students feared being ostracized by their peers for demonstrating interest in and succeeding in academic and other school-related tasks (Fordham & Ogbu, 1986; Hollins, 1994; King, 1994). Similarly, Majors and Billson (1992) suggested that school is an alien and hostile environment for African American students; this hostility manifests in the “styling” and “posturing” that school administrators reject.

Culturally competent teaching represents an appropriate method for instruction that utilizes the students’ culture (Ladson-Billings, 1995a), which may be different from what is “traditionally” expected in schools. Thus, utilizing poetry, rap, literal and figurative imagery, and creativity created a base for teachers to extend the learning of students (Ladson-Billings, 1995a). A culturally competent educator also understands the value of family and ways to involve them in their classroom (Ladson-Billings, 1995a). Ladson-Billings (1995a) asserted that finding value in the community resources provides a firsthand experience for students, because it reinforces the perspective that parents and students are knowledgeable and a capable (p. 161). According to Ladson-Billings (1995a) “students learned that what they had and where they came from was of value” (p. 161). By the same token of understanding that the family and community have value, it is equally important to value the students’ home language. Culturally competent teachers encourage students to express themselves in their home language (in speaking and writing) because they are knowledgeable and familiar with the language, and then teachers require them to translate into the standard form (Ladson-Billings, 1995a).

The teachers in Ladson-Billings' (1994) study helped her to develop the grounded theory of culturally relevant pedagogy and culturally responsive teaching. Three broad schemes emerged from the research of their classroom strategies, curriculum, and curricular approaches and Billings used these schemes to provide strategic ways in which culture could be incorporated into the classroom (Ladson-Billings, 1995b, p. 478):

- The conceptions of self and others held by culturally relevant teachers.
- The manner in which social relations are structured by culturally relevant teachers.
- The conceptions of knowledge held by culturally relevant teachers.

Conceptions of self and others. According to her study of exemplary teachers of African American students, Ladson-Billings (1994) found that these teachers challenged the view that teachers were of low status in terms of their professional occupation (Ladson-Billings, 1995b). The teachers were committed and students were not permitted to choose failure in their classrooms. The teachers were proactive and challenged their students to be as well (1995b, (pp. 478-479)). These teachers:

- Believed all students are capable of academic success,
- saw their pedagogy as art- unpredictable, always in the process of becoming,
- saw themselves as members of the community,
- saw teaching as a way to give back to the community, and
- believed in a Freirean notion of “teaching as mining” or pulling knowledge out.

Social relations. Culturally relevant teachers are intentional and create social interactions to assist them in meeting the criteria of academic success, cultural competence, and critical consciousness (Ladson-Billings, 1995b). In culturally responsive classrooms “teacher-student interactions are equitable and reciprocal; students are given the opportunity to act as teachers and

highlight their expertise” (Ladson-Billings, 1995b, p. 480). Also, culturally competent teachers, encourage a collective community rather than individual, competitive achievement (Ladson-Billings, 1995b), which ties to the literature on cultural strengths of African American students (Hilliard, 1982). According to Ladson-Billings findings (1995b, p.480), in general, culturally competent teachers:

- Maintain fluid student-teacher relationships,
- demonstrate a connectedness with all of the students,
- develop a community of learners, and
- encourage students to learn collaboratively and be responsible for another.

Conceptions of Knowledge. The final scheme that emerged from the research study of expert teachers of African American students was indicative of how the teachers processed knowledge, the curriculum and content they taught, and the evaluation of said knowledge (Ladson-Billings, 1995b, p. 481). For these teachers, knowledge is created through performance; knowledge is a two-way exchange from both the teacher and students (Ladson-Billings, 1995b). These individuals also demonstrated the ability to critically critique and adapt the curriculum as needed to fit their population. Essentially, culturally competent teachers have these conceptions or beliefs about knowledge (Ladson-Billings, 1995b, p. 481):

- Knowledge is not static; it is shared, recycled, and constructed.
- Knowledge must be viewed critically.
- Teachers must be passionate about knowledge and learning.
- Teachers must scaffold, or build bridges, to facilitate learning.
- Assessment must be multifaceted, incorporating multiple forms of excellence.

Critical consciousness. In addition to students being academically successful and allowed to maintain their cultural integrity, students must also be able to develop a broader sociopolitical consciousness that allows them to critique cultural norms, values, morals, and institutions that produce and perpetuate social inequities (Ladson-Billings, 1995a). Ladson-Billings asserted, “If school is about preparing students for active citizenship, what better citizenship tool than the ability to critically analyze the society? (p.162). Grounded in the work of Paulo Freire, Ladson-Billings (1995a) suggested that “in order for full “consciousness” to occur, students should be expected to engage the world and others critically” (p. 162). The culturally competent expert teachers that Ladson-Billings (1994) studied advocated and exposed students to methods and strategies to counter knowledge and develop multiple perspectives on a variety of social and historical phenomena.

The adaptation and evolution of culturally relevant pedagogy. Scholars have argued for the utilization of culturally relevant pedagogy to assist in bridging the gap between students’ diverse experiences and the school curriculum (Banks et al., 2001). CRP has been viewed as a framework to counter dominant perspectives and ideologies, all the while empowering students with the tools to achieve academic excellence without abandoning their cultural integrity (Howard, 2001). With this in mind, several researchers have taken the original tenets of Culturally Relevant Pedagogy and theorized new models or added additional precepts to “fit” the growing needs of students or to meet school reform initiatives.

Gay (2010) used the storytelling motif to discuss and describe culturally relevant pedagogy and teaching, because its manifestations take different forms, effects, and shapes. Several studies have been done in order to provide evidence of ways in which this style or approach of teaching benefits students of color. Scholars and researchers other than Ladson-

Billings have worked to influence how culturally responsive pedagogy and teaching are incorporated into today's classrooms: Gay (1994, 2000, 2010), Irvine (2003), Sleeter (2013), Delpit (1995) and Nieto (1999). It is important to note that many have adapted the pedagogy and approach, many keeping the core principles, but others overgeneralizing and making the model too simplistic. The goal of this section is to highlight the relevant works associated with strengthening the model and demonstrating impact here in the United States.

Geneva Gay (2010) defines culturally relevant pedagogy as teaching “to and through [students’] personal and cultural strengths, their intellectual capabilities, and their prior accomplishments” (p. 26); culturally responsive pedagogy is premised on “close interactions among ethnic identity, cultural background, and student achievement” (p. 27). Gay further notes “students of color come to school having already mastered many cultural skills and ways of knowing. To the extent that teaching builds on these capabilities, academic success will result” (p. 213). Essentially, Gay (2000, p. 44) outlines ways in which culturally responsive pedagogy requires teachers who have:

1. Thorough knowledge about the cultural values, learning styles, historical legacies, contributions, and achievements of different ethnic groups.
2. The courage to stop blaming the victims of school failure and to admit that something is seriously wrong with existing educational systems.
3. The will to confront prevailing educational canons and convictions, and to rethink traditional assumptions of cultural universality and/or neutrality in teaching and learning.
4. The skills to act productively in translating knowledge and sensitivity about cultural diversity into pedagogical practices.

5. The tenacity to relentlessly pursue comprehensive and high-level performance for children who are currently underachieving in schools.

Gay (2000, 2010) also places a strong emphasis on the “power of caring” and “power pedagogy through cultural responsiveness” and provides best practices for practitioners. Here Gay (2000, 2010) delineates the comprehensive and multidimensional nature of competence. She includes practices that are transformative, validating, multidimensional, emancipatory empowering, and are action-based responsiveness (Gay, 2000, p. 29).

Other scholars such as Delpit (1995), Irvine (2003), and Nieto (1999) have focused much of their research around the experiences of culturally diverse students, as well as “best-practices” that are appropriate to the varied needs of this population. In Delpit’s (1995), *Other People’s Children*, it is suggested that the academic problems for students of color is attributed to the result of miscommunication as schools struggle with the imbalance of power and the dynamics of inequality. According to Delpit (1995, p. 178), “Teachers and student teachers are exposed to an education that relies upon name calling and labelling (“disadvantaged,” “at-risk,” “learning disabled,” “the upper-class”) to explain its failures, and calls upon research study after research study to inform teachers that school achievement is intimately and inevitably linked with socioeconomic status.” Delpit (1995) centers her research conversation about ways to demystify the power pedagogy and teach teachers rationales to reach consciousness and become culturally competent (p.178).

In Irvine’s (2003), *Educating Teachers for Diversity: Seeing with a Cultural Eye*, competence is explored through the socioeconomic, sociopathological, genetic, and cultural lens; Irvine (2003, p. xviii) argued that effective teachers and schools are part of the solution, not the problem, in low-income urban settings. In her book, Irvine (2003) posited that teacher

preparation programs and colleges of education should assume the position of reversing the cycle of failure among students of color, by producing teachers who are culturally responsive and advocates for social justice initiatives. Irvine (2003) advocates for teachers of color to act as cultural translators and intercessors for culturally diverse students, which can in turn positively affect student achievement. Nieto (1999, p. xvii) suggested how teachers' practices, attitudes and values and schools' policies and practices can promote student learning [among those who primarily live in poverty] and are primarily students of American Indian, African American, Latino, and sometimes Asian background. Nieto (1999) examines the linkages among learning, the social context, and multicultural education; this text argued that learning is both sociocultural and sociopolitical, and should therefore emerge from students' lived experience.

Research studies on culturally responsive pedagogy. Several case studies were conducted to demonstrate what culturally relevant pedagogy looks like (variations of other terms are used such as multicultural teaching, equity pedagogy, culturally responsive pedagogy, sociocultural teaching, and social justice teaching). These case studies were based on interviews with students of color, interviews with exemplary teachers of students of color, or classroom observations along with interviews (Sleeter, 2013). Mitchell (2010) analyzed the teaching practices of African American professors to illustrate the tenets of culturally relevant pedagogy, with the impetus that culturally responsive teachers are "students of their pupils' communities. Each of the professors contextualized Black life in the United States within the historic paradigm of White supremacy with discourse around the ongoing effects that should be named and challenged (Mitchell, 2010). In their courses, students explored and discussed experiences with racism, the professors recognized students' cultural assets, and made an effort to develop the talent of their students (Mitchell, 2010).

To connect culturally relevant pedagogy with student engagement, several small-scale case studies have been conducted; these studies suggested that academic learning follows engagement (Copenhaver, 2001; Hill, 2009; Nykiel-Herbert, 2010; Rodriguez, Jones, Pang, & Park, 2004; Thomas & Williams, 2008). Howard (2001) studied the impact on African American students whose elementary teachers utilized culturally relevant pedagogy. Using interviews and observations, students described their teachers as caring about them, creating community and family-oriented environments in the classroom, and essentially creating a fun, learning environment (Howard, 2001). With a culturally centered pedagogical focus, students were motivated to participate in classroom activities and academic engagements (Howard, 2001). There have been few large-scale studies on culturally responsive pedagogy.

Savage et al. (2011) conducted a study focused on the Maori population in New Zealand with 23 schools. Researchers found that Maori students identified more with teachers trained in culturally responsive pedagogy who acknowledged their identity as Maori learners, responded to curriculum with enthusiasm, and engaged more with teachers (Savage et al., 2011). Maori students also appreciated teachers' incorporation of Maori culture into the classroom and teachers' commitment to getting to know them.

Keeping with the theme of limited studies, there have been few empirical studies that directly connect culturally responsive pedagogy with its impact on student academic learning. Lee's (2006) research and development of Cultural Modeling Project "is a framework for the design of curriculum and learning environments that links everyday knowledge with learning academic subject matter, with a particular focus on racial/ethnic minority groups, especially low-income youth of African descent" (p. 308). The Cultural Modeling Project's curriculum positively affects the ability of African American English speakers to interpret symbolism, a skill

students use in rap and Hip Hop, and the model allows for students to draw on elements of Black cultural life such as Black media or the Black church, to more general strategies of literary analysis and application to canonical literary works (Lee, 2006). This qualitative case study focused on students gradually learning to direct discussions interpreting and analyzing texts through the Cultural Modeling process using cultural datasets, which traditional English achievement tests did not allow for and often do not capture (Lee, 2006). Students in this study were able to transfer competences they developed from reasoning about common, everyday texts to reasoning about canonical literature: from examinations of the quality of reasoning about canonical texts that followed the modeling phase of instruction, and assessing talk-aloud protocols of case study students (Lee, 2006, p. 319).

Rickford (2001) assessed the effect of cultural congruence and higher order questioning on the reading enjoyment and comprehension of ethnic minority students in low-income populations. Through a two-year study with middle school students, Rickford (2001) found that although many of the students were weak readers, many of the students thought at a higher level when presented with texts that were culturally relevant and the questioning was both higher-order and analytical. Students in this study were motivated to participate, and the teacher's involvement in learning more Black folktales and African folktales, "built a foundation of acceptance and facilitated the spirit, tolerance, and cross-cultural involvement present in the classroom" (p. 384).

Culturally relevant pedagogy in teacher education. Empirical research on the preparation of teachers for culturally responsive pedagogy is also limited and consists mostly of case studies (Sleeter, 2013). Many of the case studies center on preparation, which ultimately spotlights problems and barriers educators experience, and these studies demonstrate how

problems and barriers can be addressed. Typically, in teacher education programs both traditional and nontraditional teacher education programs, there are substantial challenges in preparing early professionals to meet the needs of culturally diverse students in a critical and relevant manner. According to Milner (2010, p. 153) these challenges are as follows:

- Teachers read in textbooks or hear lectures that teaching involves developing a conceptual repertoire related to understanding diversity, many of them still do not believe it will matter in their particular classroom
- Many teachers accept the reality that diversity matters for some teachers, they struggle to see how diversity matters for them due to them attending predominately homogeneous institutions
- Pre-service teachers may be concerned that an emphasis on diversity may cause them to be paranoid, and force them to see and think about issues that were not really there but were constructed through images that were painted in the teacher education classroom.
- Pre-service teachers may hold on to deeply ingrained racist beliefs due to historical and familial roots.

Most Pre-service teacher programs have some requirement for students to fulfill a diversity or multicultural component (Ladson-Billings, 2011); unfortunately, most programs do not have the adequate capacity to make this requirement an integral part of the program (Cochran-Smith, 2003). In turn, the requirement is handled by a single course, a workshop, or a program module (Cochran-Smith, 2003). According to Cochran-Smith (2003), this single course tends to segregate the course from other aspects of the program; the content isn't connected to methods courses or field experiences, and some faculty resist teaching the multicultural component for fear of student resistance and poor evaluations. Because of the aforementioned

challenges, it is quite difficult to get teachers to investigate themselves and critique their views and “*become certain only of uncertainty*” (Cochran-Smith, 2003). Allowing opportunities and encouraging pre-service and in-service teachers to think critically and discuss uncomfortable topics is of great importance, if we ever want to truly move towards meeting the needs of culturally and economically disadvantaged students.

Leonard, Napp, and Adeleke (2009) found teachers to make inaccurate assumptions about what might be relevant to their students, and as a consequence limited the them and their students. With the researchers working with them, they were able to overcome these assumptions with question prompting. Milner (2010) conducted a case study working with six White, female teachers to discuss teachers’ mindsets and practices as they relate to student opportunity gaps. Various themes emerged to challenge stereotypes, assumptions, and relevance of being a culturally competent teacher (Milner, 2010). Athanases, Wahleithner, and Bennett (2012) conducted a study with pre-service teachers using teacher inquiry with culturally and linguistically diverse students. Pre-service teachers utilized teacher inquiry and took actions of various kinds to learn about diverse students: researching contexts and histories; examined student work and performance at full-class, subgroup, and individual levels; and asked and listened beneath the surface to students’ reasoning, attitudes, beliefs, and concerns about school learning and other issues (Athanases, Wahleithner, & Bennett 2012). Santamaria (2009) conducted a case study using professional development approach with in-service teachers dispelling myths of using both culturally relevant pedagogy and teaching with differentiated instruction. Observations and supporting documents, collected over a five-year period, found the best practices are those that consider all learners in the classroom setting and pay close attention to the differences inherent to academic, cultural, linguistic, and socioeconomic diversity

(Santamaria, 2009). Santamaria (2009) found that a hybrid approach of using both CRP and Differentiated Instruction was a best practice in school reform efforts. Bishop, Berryman, Cavanagh, and Teddy (2009) studied the impact of culturally relevant teaching on 422 teachers in 12 schools and found a shift in teachers' pedagogy from didactic to discursive and relationship-based teaching, which lead to an increase in Maori's students standardized test scores.

Numerous case studies of teachers learning culturally responsive pedagogy explore the impact of specific kinds of pre-service and professional development programs, through either school-university partnerships (Bales & Safford, 2011), inquiry-based courses (Jennings & Smith, 2002), teacher networks (El-Haj, 2003), community-based learning (Fickel, 2005), and sustained workshops combined with classroom-based coaching (Kozakiewicz & Rodriguez, 2007). There is a need for more systematic research that links culturally relevant pedagogy to student impact, as well as more research that connects teacher professional development in culturally responsive pedagogy with improved student learning (Sleeter, 2013).

Contemporary views of CRP and new directions. According to Sleeter (2013), "Culturally responsive pedagogy is often understood in limited and simplistic ways" (p.53). Due to teachers being pressured to gear their work towards standardization, attempts to work with culturally responsive pedagogy become increasingly difficult (Sleeter, 2013). For example, the intense pressure of high stakes testing, teachers have less time to research and develop curriculum that students can relate to, non-tested curriculum dissipates under pressure to raise test scores, and teachers are increasingly patrolled to ensure they are teaching the required curriculum (Achinstein & Ogawa, 2006; Comber & Nixon, 2009; Crocco & Costigan, 2007; Gillborn & Youdell, 2000; Sleeter & Stillman, 2007). Because of the aforementioned reasons

and lack of knowledge on CRT's tenets, culturally responsive pedagogy has been simplified in four ways as cultural celebrations, trivialization, essentializing culture, and substituting cultural for political analysis of inequities (Sleeter, 2013, p. 53). *Cultural celebrations* relegate to being disconnected from academic learning, and include ignoring the lived experiences of students, as well as power relations (Sleeter, 2013, p. 53).

Cultural traditions typically boil down to "learning" about cultural traditions, instead of using cultural processes to teach students challenging academic knowledge and skills (Nykiel-Herbert, 2010). *Trivialization* of CRP entails reducing it to steps to follow, rather than fully understanding the intricacies of the paradigm for teaching and learning (Sleeter, 2013, p. 54). Patchen and Cox-Petersen (2008) found that science teacher chose isolated strategies such as cooperative learning to insert into teacher-directed instruction, instead of reconsidering their entire approach. *Essentializing culture* encompasses assuming fixed and homogeneous characteristics or conceptions of the culture of an ethnic or racial group, essentially generalizing populations (Sleeter, 2013, p. 55). For instance, a teacher who equates culture with race or with a foreign country when asking students "What are you?" and "Where are you from?" exhibits both damaging and superficial understanding of culture (Dutro, Kazemi, Balf, & Lin, 2008). Lastly, CRP is simplified by substituting cultural for political analysis, which involves maintaining silence about the pervasive issues of racism and other forms of oppression that underlie achievement gaps and alienation from school (Sleeter, 2013, p. 56). To explain, teachers' construction of minoritized students in deficit terms, which in turn have negative consequences on students' academic experiences and success (Shields, Bishop, & Mazawi, 2005).

As a result of the oversimplification of culturally relevant pedagogy, several scholars have called for a reframe of culturally responsive pedagogy as well as more research of the

impact of Criterion Reference Tests (CRT) outside of academic achievement (Brayboy & Castagno, 2009; Sleeter, 2011). Paris (2012) argues against the use of ubiquitous terms *responsive* or *relevant* considering that either term do not guarantee in stance or meaning of one goal of educational program- which is to maintain heritage ways and to value cultural and linguistic sharing across difference, and to sustain and support multiculturalism (p. 95).

Paris (2012) posited that a new term and new approach is necessary in order to more accurately embody past and present research and practice, as well as offer pre-service and in-service teachers a way of both naming and conceptualizing the need to meaningfully value and maintain the practices of their students (p. 95). By doing this, educators extend their students' repertoires of practice to include dominant language, literacies, and other cultural practices (Paris, 2012). Paris (2012) advocated for the term culturally sustaining pedagogy, which embodies past and present research, and requires pedagogies be more than relevant or responsive. This particular term requires that educators support the youth in sustaining the cultural and linguistic competence of their communities while simultaneously offering access to dominant cultural experiences (Paris, 2012, p. 95). This particular approach supports multilingualism and multiculturalism, all the while seeking to sustain linguistic, literate, and cultural pluralism (Paris, 2012). This model's use of languages and practices through African American Language (AAL), Hip Hop cultures, and other cultural practices associated with AAL and Caribbean American culture provides a way for students to rehearse traditional versions of language with new visions of ethnic and linguistic difference (Alim & Reyes, 2011; Paris, 2011). There have been several criticisms to this emerging model, and further research on critical reflexivity and use of language has been at the forefront of arguments against the use of this model (Paris & Alim, 2014).

Brown-Jeffy and Cooper (2011) conceptualized a framework of culturally relevant pedagogy teaching behaviors using Gay's (1994, 2000), Ladson-Billings' (1994), and Nieto's (1999) principles to relegate five themes: (a) identity and achievement, (b) equity and excellence, (c) developmental appropriateness, (d) teaching the whole child, and (e) student-teacher relationships. According to Brown-Jeffy and Cooper (2011), the theme identity and achievement has several layers: identity development, cultural heritage, multiple perspectives, affirmation of diversity, and public validation of home-community cultures, which includes the social and cultural capital that students bring to school with them (p. 72). Within this theme both the student and teacher identities are considered, taking in consideration language, ethnicity and race, gender, class, language, region, religion, exceptionality, and other diversities that help to define the individuals (Brown-Jeffy & Cooper, 2011). Critical Race Theory plays a considerable role in understanding identity development, markedly by letting students know that individually and collectively their voices are heard, that they matter, and their presence and contributions are valued (Brown-Jeffy & Cooper, 2011, p. 73).

Equity and excellence addresses dispositions, incorporation of multicultural curriculum content, equal access, and high expectations; essentially, the equity and excellence theme resolves to giving students what they need (Brown-Jeffy & Cooper, 2011). The theme of developmental appropriateness includes the following concepts: learning styles, teaching styles, and cultural variation in psychological needs (motivation, morale, engagement, collaboration); developmental appropriateness focuses on the implementation of activities designed to meet the cognitive, emotional, social and psychological needs of students (Brown-Jeffy & Cooper, 2011, p. 76). Developmental appropriateness also requires that teachers are cognizant of the dominant,

often racist ideologies of institutional racism, and neoliberal policies (Brown-Jeffy & Cooper, 2011).

Teaching the whole child theme is closely related to developmental appropriateness; it includes the concepts of skill development in a cultural context, home-school-community collaboration, learning outcomes, supportive learning community, and empowerment (Brown & Cooper, 2011). Brown-Jeffy and Cooper's (2011) last theme of culturally relevant pedagogy addresses teacher-student relationships. This particular theme is comprised of caring, relationships, interaction, and classroom atmosphere. When these aspects are included within the school environment and beyond, awareness, appreciation, and acceptance of difference discourse patterns and styles of communication bridge the gap between home-community and school culture (Brown-Jeffy & Cooper, 2011, p. 78). Brown-Jeffy and Cooper provide a model that maintains the original tenets of CRP, but delineate the model into layers that could potentially help in-service and pre-service teachers understand the framework in order to teach their students and develop and practitioners.

Ladson-Billings (2014) reflects on Culturally Relevant Pedagogy and the ways it has been used and misused since its inception, and provides a "remix." Ladson-Billings (2014) reflects on her conception of CRP, and mentions she was primarily concerned with methods to improve teacher education, with the hope to produce new generations of teachers who would appreciate their students' assets. Ladson-Billings reviews and serves as a reviewer of emerging works such as culturally sustaining pedagogy. She herself makes the statement of being "increasingly dissatisfied with the static conception of what it means to be culturally relevant (p. 77)." She criticized the lack of focus on critical perspectives when utilizing CRP, in regards to policies and practices that have direct impact on the lives of students such as school choice,

school closings, rising incarceration rates, gun laws, and everyday school climate questions (Ladson-Billings, 2014). In addition to her criticisms of the use and misuse of CRP, she discusses ways in which scholars are pushing forth the work of making CRP more fluid with culturally sustaining pedagogy and culturally revitalizing pedagogy. Ladson-Billings (2014) asserts that these are still works in progress with no definitive or prescriptive solutions, but credit the works with being progressive.

Theory of Talent Development: Gagne's Differentiated Model of Giftedness and Talent

The operational definition of talent development has evolved and is typically open to several interpretations. For this review, Gagnè's (2004) Differentiated Model of Giftedness and Talent (DMGT), is the framework used to describe talent development of gifts and abilities. DMGT is a holistic, theoretical talent development framework that emphasizes the importance of context, natural aptitudes, and developed abilities. According to Gagnè (2004), giftedness designates the possession and use of untrained and spontaneously expressed natural abilities (called outstanding aptitudes or gifts), in at least one ability domain, to a degree that places an individual at least among the top 10% of same-aged peers.

Gagnè (2004) also expressed that talent designates the outstanding mastery of systematically developed abilities (or skills) and knowledge in at least one field of human activity to a degree that places an individual at least among the top 10% of age peers who are or have been active in that field or fields. According to his definitions of gifts and talents, Gagnè (2004) proposed that giftedness is the potential or aptitude within an individual, and that this can be developed into talent by environmental and other factors. In this model, the informal/formal learning processes and practicing that occur, can be combined with environmental catalysts to transform natural skills into developed talent (Gagnè, 2004).

Table 2.1

Part I: Multicultural Gifted Education: A Synthesis of Goals and Objectives

Goals and Rationale	Gifted Education	Multicultural Education	Multicultural Gifted Education
Needs	Meet individual needs of students based on ability and interests.	Meet individual needs of students based on race and culture.	Meet individual needs of students based on ability and sociodemographic variables-income, SES, culture, ethnicity, and gender
Equity	Gifted students have a right to an education that is nondiscriminatory and a right to educational programs and services that meet their cognitive and academic needs.	Racially and culturally different students have a right to an education that is nondiscriminatory and a right to an education that meets their needs as cultural and racial beings.	Gifted students have a right to an education that is equitable and nondiscriminatory and a right to educational programs and services that meet their cognitive and academic needs, regardless of culture, ethnicity, gender, income, and SES.
Excellence	Gifted students cannot achieve to their potential when educational standards fail to challenge them. Curricular and instructional modifications are essential for meeting the needs of highly able students.	Racially and culturally different students cannot achieve to their potential when expectations are low or fail to consider their culture and race. Curricular and instructional modifications are essential for meeting the needs of racially and culturally different students.	Gifted students cannot achieve to their potential when educational standards and expectations are low and negative based on culture, ethnicity, gender, income, and SES. Curricular and instructional modifications are essential for meeting the needs of highly able students of all racial cultural backgrounds, and all income and SES levels.
Grouping	Ability grouping facilitates the academic and cognitive development of gifted students; gifted students perform better when taught with true peers (cognitive and social).	Cooperative and peer grouping provide social support and build relationships; racially and culturally different students perform better academically and affectively when the learning environment is supportive, nurturing, and affirming.	Grouping promotes academic and social development; all students perform best academically and social-emotionally when the learning environment is supportive, nurturing, and affirming.

Source: Ford (2011)

Table 2.2

Part II: Multicultural Gifted Education: A Synthesis of Goals and Objectives

Goals and Rationale	Gifted Education	Multicultural Education	Multicultural Gifted Education
Under-achievement	Underachievement must be prevented or reversed so that gifted students reach their potential in school and life.	Underachievement must be prevented and/or reversed so that racially and culturally different students reach their potential in school and life.	Underachievement must be prevented or reversed so that gifted students reach their potential in school and life, regardless of culture, race, gender, income, and SES.
Affective and Supportive Services	Supportive services must be present in schools to help gifted students to adjust psychologically and socially and increase their self-understanding and appreciation of abilities.	Supportive services must be present in schools to help racially and culturally different students to adjust psychologically and socially and increase their self-understanding and appreciation of culture and ethnicity.	Supportive services must be present in schools to help all students to adjust psychologically and socially, regardless of sociodemographic variables; students must have self-understanding and appreciate and respect their race, culture, and gender
Teacher Training	Teachers must be trained to work effectively with gifted students and provide relevant and rigorous education.	Teachers must be trained to work effectively with racially and culturally different students and provide a culturally relevant and appropriate education.	Teachers must be trained to work effectively with all gifted students and provide a rigorous and culturally relevant education.
Lifelong goals	Gifted education helps children to become responsible adults who make significant contributions to society.	Education helps racially and culturally different children to become responsible adults who make significant contributions to society.	Education helps gifted children from all backgrounds to become responsible adults who make meaningful contributions to society and citizens who are culturally competent, as well as socially active, responsive, and responsible.

Talent development and pre-service teacher preparation. With interventions and meeting minimal levels of performance at the forefront of many school improvement plans, where does talent development fit into the paradigm/structure of high-poverty schools?

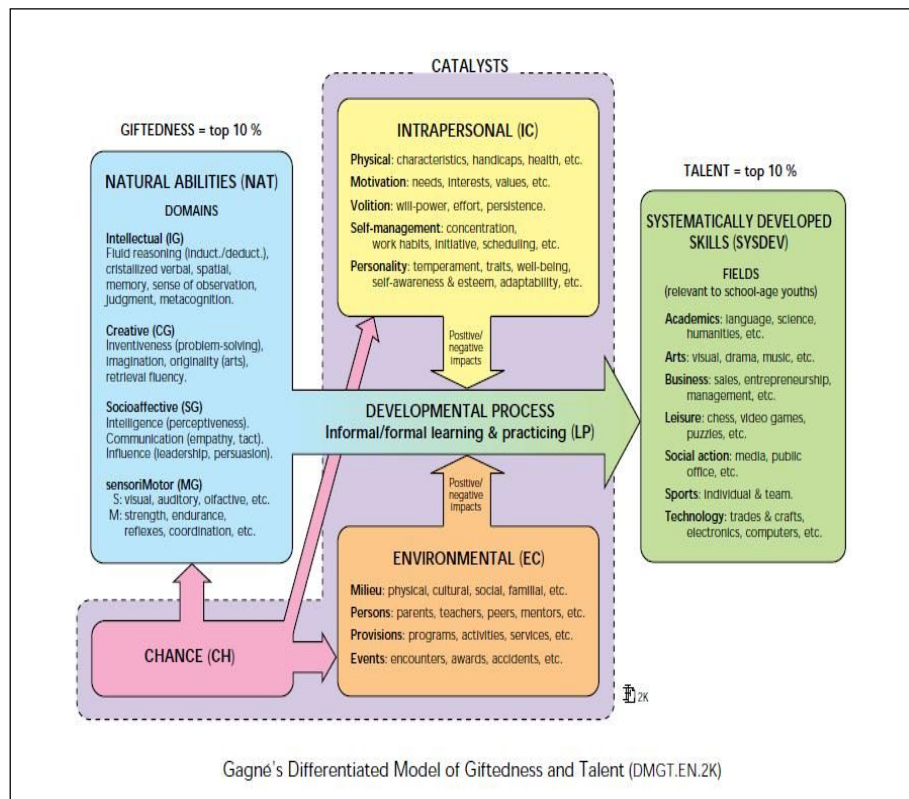


Figure 2.1. Overview of Gagné's (2004) Differentiated Model of Giftedness and Talent.

Many teachers are unfamiliar with the myriad of ways in which gifts and talents manifest in students, particularly students of color and children living in poverty. According to Ford, Grantham, and Whiting (2008), few teachers have formal preparation in gifted education, leading to the question of whether or not teachers understand giftedness and are familiar with characteristics of giftedness, particularly with diverse populations. VanTassel-Baska et al. (2008) notes, "In the United States, training in gifted education is more optional at the secondary level, especially as it is carried out through professional development services that a local district

provides, state gifted education endorsement, and/or graduate courses in gifted education (p. 347). Likewise, as scholars and practitioners, we cannot assume that gifted education programs and professional development seminars prepare in-service and pre-service educators to work with racially and culturally different students (Ford, 2011). Due to the unfamiliarity of educators with gifted education and talent development, one can infer that many of our students are not being fully provided with the talent development and services they need in order to achieve commensurate with their potential. Feldhusen (1997) observed almost two decades ago:

Some teachers undoubtedly can acquire those skills and understanding through their own practice experiences working with talent youth in the classroom. However, the daily demands of serving youth with a wide variety of ability and achievement levels and a diversity of interests, learning styles, and motivations, as well as the American tendency to focus on low-achieving or “problem” students, make it less likely that teachers will take time to study the special needs and characteristics of highly talented youth and determine how best to facilitate their learning. (p. 547).

Staiger (2004) noted that if there is a difference between the cultural background of the students and teacher, then there might be a compromise of the teacher’s ability to assess the student’s potential for giftedness. As our population becomes increasingly more ethnically, culturally, and socio-economically diverse, there have been several calls from educational organizations, policy makers, practitioners, and advocate groups for substantive changes in teacher education programs (Sorrells, Webb-Johnson, & Townsend, 2004). These changes include but have not been limited to: (a) increase the diversity among teacher education faculty, (b) recruit more Culturally and Linguistically Diverse (CLD) students into teacher education programs, and (c) prepare White pre-service and in-service teachers to provide culturally

responsive instruction for all learners (Ford, 2011; Gay, 2002; Irvine, 2003; Milner, 2010; Sorrells et al., 2004). Several have also petitioned for more coursework or training in gifted education in regards to understanding the talent manifestations and development of CLDs students (Baldwin, 2007; Ford, 2011; Moon & Rosseli, 2000; VanTassel-Baska, 2003).

Much of the gifted education literature focuses on the lack of teacher preparation for those serving racially and culturally different high-ability students, and due to this lack of training, many students of color and students living in poverty are overlooked and underserved. Underrepresentation of Black, Latino, and American Indian students in gifted and talented programs and Advanced Placement (AP) continues to be recurring and pervasive problem in schools (Ford, 1998; Ford & Grantham, 2003; Olszewski-Kubilius & Clarenbach, 2012). There have been several identified factors that contribute to the underrepresentation of Black, Latino, and American Indian students. These factors include screening and identification issues (e.g., definitions and instrumentation), educational issues (e.g., quality of students' education), and personnel issues (e.g., lack of teacher training in gifted and urban education, low teacher referral) (Ford, 1998). According to Ford (2011) and National Association for Gifted Children (2012) standards, educators must be: (a) self-aware and have self-understanding, (b) cultural understanding and awareness, (c) socially responsible and responsive, (d) use culturally sensitive techniques and strategies (pp. 41-42).

Gifted education training has historically been offered at the graduate level, and few elementary teachers choose gifted education as a focus when pursuing a master's degree (Bangel, Moon, & Capabiano, 2010). Consequently, most elementary teachers receive their training in gifted education through in-service professional development, and these sessions have been found to result in minimal change in participants' classroom strategies (Reis & Westberg, 1994).

Bangel et al., (2010) asserted that it is appropriate and much needed to provide instruction in gifted education for elementary teachers at the pre-service level. Moon and Rosselli (2000) also posited that this shortage of training in gifted education could be remedied if pre-service teacher education programs provided coursework in gifted education.

There are limited studies conducted with pre-service teachers working with special populations. Trent and Dixon (2004) worked with pre-service teachers enrolled in a special education course, with an added multicultural component, to better understand the impact of multicultural education on the thinking and actions of teachers. Moon, Callahan, and Tomlinson (1999) found that as pre-service teachers received more experiences working with academically diverse students, they understood the need to vary instruction to meet the needs of diverse learners. This understanding complicated issues of planning, in order to differentiate for the needs of students and that it is a process, therefore teachers becoming more hesitant with incorporating differentiation into their classroom (Moon et al., 1999). Baldwin & Baldwin (2005) conducted a study with pre-service and in-service teachers concerning their personal beliefs about diversity and their professional beliefs about diversity. Based on the results of the study, elements of effective teacher training programs were outlined, and the beliefs and attitudes were explored. For pre-service teachers age effected their personal and professional beliefs scores, and experience provided a more constant belief system regarding diversity. From the small sample, students of color had varying opinions and degrees of awareness of diversity issues, but were more aware of institutional diversity issues than white middle and upper middle class males (Baldwin & Baldwin, 2005).

Bangel et al., (2010) conducted a study with pre-service teachers designing their practicum experiences with gifted students using a 9-week online training model to accompany

the field experiences. Participants perceived an increase in their understanding of the needs and characteristics of gifted students through participation in the interventions as well as increased confidence in their general teaching abilities (Bangel et al., 2010). Berman, Schultz, and Weber (2012) found that including one course focusing on the needs and characteristics of gifted learners in a general education program still lacked in providing awareness about the nature and needs of gifted learners. Many pre-service teachers enrolled in the course generalized that gifted children in their classrooms are viewed as peer-tutors candidates who have advanced beyond the current material (Berman et al., 2012, p. 24). Berman et al., (2012) concluded that teacher education programs must include coursework and experiences focused on the development of gifted learners to overcome common misconceptions, so that these students' needs will be met in the general education classroom. These needs include engaging in rigorous, authentic experiences that meet and/or exceed the ability levels of the students, intentionally differentiating for students who are academically advanced.

Even with these calls for additional teacher training in gifted education, there are several more layers of need when you add characterizations such as economically disadvantaged, racially different, linguistically different, and culturally different students. Teachers have not been prepared to adequately address, understand, or work with this diversity in general, and particularly when a talent identification layer has been included (Ford, 1998; Ford & Grantham, 2003; Gay, 2002; Harry, 2002; Ladson-Billings, 1995, 2014; Sleeter & Grant, 1994). The question then becomes, how do researchers and scholars, as well as those charting teacher preparation programs identify what pre-service teachers know about inclusive talent identification and development practices for underserved students? The goal for my research study was to collect data on what pre-service teachers know about diversity using a newly

constructed instrument. This initial profile of pre-service teachers allows for the identification of areas that need improvement; consequently, providing valuable information to improve instructional delivery and programming for low-income underserved youth in our public schools.

Research Methodology

Questionnaire development. According to DeVellis (2016), measurement instruments are collections of items that are combined into a composite score and intended to reveal levels of theatrical variables not readily observable by direct means. A questionnaire is “a measure that presents a set of written questions to which all individuals in a sample respond” (Gall, Borg, & Gall, 1996, p. 767). Previous researchers have commented on the usefulness of questionnaires for collecting different types of data related to background and demographic information, behavior, attitudes and opinions, knowledge, and intention or expectation information (Breakwell, Hammond, & Fife-Schaw, 1994).

A content validity study can provide information on the representativeness and clarity of each item, as well as provide a preliminary analysis of the factorial validity (Rubio, Berg-Weger, Tebb, Lee & Rauch, 2003). According to Rubio et al., (2003), content validation procedures involve multiple steps: (a) conduct a literature review to define the construct and draft items; (b) select a panel of experts (content and lay experts); (c) solicit experts’ participation; (d) analyze the data using a factorial analysis; and (e) revise the measure (pp. 98-100).

The use of scenarios. In order to present a case to those taking the survey, a scenario was crafted to provide a frame of reference for participants. Scenarios have been frequently used in survey research as an attempt to understand motivating factors of emotions, behaviors, needs, and values (Hutchins, 1975). These scenarios are often referred to as vignettes, and are

experimentally controlled by the researcher; these scenarios selectively portray aspects of reality to which participants are asked to respond (Encyclopedia of Survey Research Methods, 2008).

Structural Equation Modeling. Structural equation models (SEM) emerged from the field of sociology (Bielby & Hauser, 1977), and its popularity for researchers in various disciplines has increased in the last couple of decades (Kline, 2015). Structural equation modeling is an appealing model to use because of the “fitting” process, and analysts employ their knowledge base to construct a multiequation system to find associations among all latent variables, disturbances, and indicators (Bollen, 1989, p. vi). Byrne (2012) defines SEM as a “statistical methodology that utilizes a confirmatory approach to the analysis of a structural theory relevant to a phenomenon” (p. xi). “SEM has two important aspects of the procedure: (a) that the causal processes under are represented by a series of structural (i.e., regression) equations, and (b) that these structural relations can be modeled pictorially to enable a clearer conceptualization of the theory under study” (Byrne, 2012, p. 3). To date, this theory typically represents causal processes, which is a dated expression that was initially associated with the SEM technique (Byrne, 2012; Kline, 2015).

The purpose of SEM is to test a hypothesized model statistically, using a system of variables to establish the extent to which the bevy of variables are consistent with the data (Byrne, 2012). If the hypothesized model has a goodness-of-fit, “the model argues for the plausibility of postulated relations among variables; if it is inadequate, the tenability of such relations is rejected” (Byrne, 2012). Because of its *a priori* approach, SEM is appropriate and useful for inferential purposes (Byrne, 2012). SEM also specifies conditions to correct for measurement error; in addition, structural equation modeling explicitly provides estimates of these error parameters. SEM is particularly helpful for those studying observed and latent

variables. For my purposes, SEM provides a manner to conduct nonexperimental research to study theoretical constructs associated with attitudes associated with marginalized populations that cannot be observed directly.

This analysis is particularly helpful in education, specifically in understanding behaviors, traits, and giftedness of marginalized populations. With experimental studies, rarely are researchers able to observe what is occurring in the natural setting, due to manipulation (Loehlin, 2004). With SEM, we are able to distinguish between the direct and indirect causal effects between variables, as well as postulate the relationship pattern a priori, and then test the hypothesis statistically (Byrne, 2012).

Confirmatory factor analysis. According to Kline (2015) Confirmatory Factor Analysis (CFA) have the following characteristics:

1. Each indicator is a continuous variable represented as having to cause a single factor that the indicator is supposed to measure and all other unique sources of influence (omitted causes) represented by the error term.
2. The measurement errors are independent of each other and of the factors.
3. All associations between the factors are unanalyzed (the factors are assumed to covary) (p.113).

CFA tests whether a specified set of constructs is influencing responses in a predicted way, essentially studying how well a hypothesized factor model fits a new sample from the same population or a sample from a different population (Lu, 2016). Confirmatory factor analysis allows for estimates of these direct effects (factor loadings), and these factor loadings are analyzed and interpreted using regression coefficients, lending insight to effect indicators (Kline, 2015). CFA provides results that include estimates of factor variance and covariances, loadings

of indicators on their respective factors, and the amount of measurement error for each indicator (Kline, 2015).

CFA typically has designs for construct validation and scale refinement, multitrait-multimethod validation, and measurement invariance and has been used in multiple disciplines (MacCallum & Austin, 2000). Jackson, Wall, Martin, and Davids (1993) utilized multi-item assessment scales using factor analysis to develop five scales for assessing job control, cognitive demand, and production responsibility. Using a series of nested measurement models, they tested two samples of shop employees, confirming a hypothesized five-factor model as well as invariance for four of the five factors across their samples. LaNasa, Cabera, and Trangsrub (2009) conducted a study using CFA on the construct validity of student engagement using the National Survey of Student Engagement (NSSE). LaNasa et al., (2009) used NSSE five benchmarks to determine their interdependence, and the extent to which items on the questionnaire reflect these five dimensions/benchmarks. LaNasa et al., (2009) wanted to demonstrate how well this particular instrument fits an urban institution, with the help of EFA found that there were eight dimensions/benchmarks of student engagement. Therefore, there were more “practices” of student engagement found than were originally accepted by NSSE. Considering my research questions, instrument evaluation, and goal to analyze practices of pre-service teachers in talent development, CFA can assist me in understanding these latent constructs.

Summary of literature review. Chapter 2 provided a review of the literature on high-ability, culturally, linguistically, and economically disadvantaged students and how contextual influences and teacher perceptions influence their identification for gifted education. The chapter also addressed how the implementation of Culturally Responsive Pedagogy can be a conduit to

help pre-service teachers better serve their students, as well as understand their cultural styles and strengths. The chapter also included information regarding methods to use for questionnaire development, as well as the statistical procedures most appropriate for validation of the instrument.

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CHAPTER 3
DEVELOPMENT AND INITIAL VALIDATION OF AN INSTRUMENT TO ASSESS
THE KNOWLEDGE AND ATTITUDES TOWARDS INCLUSIVE TALENT
IDENTIFICATION AND DEVELOPMENT OF
UNDERSERVED, LOW-INCOME YOUTH²

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Abstract

The purpose of this study was to develop a reliable and valid instrument to assess the knowledge and attitudes teachers have towards inclusive talent identification and development among high-ability, underserved youth. The instrument, Inclusive Talent Identification and Development Questionnaire (ITID-Q) was developed with an underpinning of culturally relevant pedagogy and talent development theory. Generated items were based on literature review and standards in gifted and multicultural gifted education. Following an external review panel of experts, committee members were in agreement on majority of the items, but a consensus on domain alignment was not achieved. The instrument was then piloted with a sample of 125 teachers from local school districts. CFA was the intentioned statistical procedure for the validation of the model, but failed to converge due to small sample size, and lack of variance. The researcher intends to adapt the instrument, and analyze with Principal Component Analysis in a future study.

Keywords: underserved students, gifted education, high-ability students, teacher preparation, teacher training, CFA, talent development, talent identification

Issues of Underrepresentation: Narrowing the Focus on Teacher Perspectives

Significant attention in gifted education literature has focused on low-income gifted and talented students, exploring the risk of underachievement, underrepresentation of culturally diverse students, issues with identification (eligibility and assessment measures), funding disparities, and types of interventions that have shown effectiveness in meeting the needs of underserved students, with underrepresentation typically being the focus (Ford, 1998, 2011; Ford & Grantham, 2003; VanTassel-baska & Stambaugh, 2007). Underrepresentation of Black, Latino, and American Indian students in gifted and talented programs and Advanced Placement (AP) continues to be recurring and pervasive problem in schools (Ford, 1998; Ford & Grantham, 2003; Olszewski-Kubilius & Clarenbach, 2012). There have been several identified factors that contribute to the underrepresentation of Black, Latino, and American Indian students. These factors include screening and identification issues (e.g., definitions and instrumentation), educational issues (e.g., quality of students' education), and personnel issues (e.g., lack of teacher training in gifted and urban education, low teacher referral) (Ford, 1998; Frasier, 1997; McBee, 2006; Naglieri, 2008; Naglieri & Ford, 2003). It has been well-documented that teachers act as "gatekeepers" in the identification process (Ford, 1998; Frasier, 1997; McBee, 2006). Despite the acknowledgement of teacher training being a factor contributing to the underrepresentation of Black, Latino, and American Indian students in gifted programs, too few studies have been devoted to pre-service and in-service teachers working with low-income, underserved students.

The incongruity of teachers and students cultural backgrounds becomes more noticeable as the student population in the United States becomes increasingly diverse. Because of the dissimilarity between the backgrounds of students and their teachers, and the need for equitable

practices, standards have been outlined for those facilitating the preparation of educators. These standards apply for those in enrolled teacher preparation programs, in-service educators, and for those coordinating professional development. According to the National Association for Gifted Children (2012) standards and Ford (2011), educators must be: (a) self-aware and have self-understanding, (b) cultural understanding and awareness, (c) socially responsible and responsive, (d) use culturally sensitive techniques and strategies (pp. 41-42). For culturally, linguistically, and economically disadvantaged and diverse students (CLED), there is a disconnection between their contextual realities and academic expectations (Ford, 1998; Frasier, 1997; Gay, 2000), and teachers who perceive them as having limited abilities (Baldwin, 2007; Liang & Zhang, 2009; Terrill & Mark, 2000; VanTassel-baska & Stambaugh, 2007; Torrance, 1974). Making it essential that these standards incorporated into daily practices to bridge the disconnect and lackluster academic expectations between the CLED students and their teachers.

Although there is a bevy of information on the needs of culturally and linguistically diverse gifted students and standards to carry out the programming, there is little being done for pre-service teachers to adequately prepare them to meet the needs of gifted students in general, and specifically with underserved students (Feldhusen & Kolloff, 1986; VanTassel-Baska, 2003). As stated by Ford (2011) “Increased diversity among school personnel, modifications in curriculum and instruction, and philosophical changes can be implemented more effectively when school personnel are trained to be more culturally aware and competent” (p. 40). There is a great need to better train teachers and make the aforementioned adaptations made by Ford (2011) to work with diverse populations of gifted students, particularly those from underrepresented minority and low-income backgrounds.

Well-trained teachers and personnel are vital to meeting the needs of high-ability students; however, many in-service teachers are unfamiliar with the myriad of ways in which gifts and talents manifest in students, particularly students of color and children living in poverty. VanTassel-Baska et al. (2008) notes, “In the United States, training in gifted education is more optional at the secondary level, especially as it is carried out through professional development services that a local district provides, state gifted education endorsement, and/or graduate courses in gifted education (p. 347). Likewise, as scholars and practitioners, we cannot assume that gifted education programs and professional development seminars prepare in-service and pre-service educators to work with racially and culturally different students (Ford, 2011). Due to the unfamiliarity of educators with gifted education and talent development, one can infer that many of our students are not being fully provided with the talent development and services they need in order to achieve commensurate with their potential. Feldhusen (1997) observed almost two decades ago:

Some teachers undoubtedly can acquire those skills and understanding through their own practice experiences working with talented youth in the classroom. However, the daily demands of serving youth with a wide variety of ability and achievement levels and a diversity of interests, learning styles, and motivations, as well as the American tendency to focus on low-achieving or “problem” students, make it less likely that teachers will take time to study the special needs and characteristics of highly talented youth and determine how best to facilitate their learning. (p. 547).

Presently, these issues are still pervasive in educational settings, particularly in high-poverty schools, and due to budget cuts and a hyperfocus on standardized testing, these issues are further exacerbated (Diamond & Spillane, 2004).

There are limited studies conducted with pre-service teachers working with special populations, particularly with high-ability, Black, Latino/a, or American Indian Students from economically disadvantaged backgrounds. These studies tend to look at gifted and talented students in the broader sense, rather than looking explicitly at low-income, ethnic minority students. Trent and Dixon (2004) worked with pre-service teachers enrolled in a special education course, with an added multicultural component, to better understand the impact of multicultural education on the thinking and actions of teachers. Moon, Callahan, and Tomlinson (1999) found that as pre-service teachers received more experiences working with academically diverse students, they understood the need to vary instruction to meet the needs of diverse learners. This understanding of complicated issues in planning, in order to differentiate for the needs of students and that it is a process, therefore teachers becoming more hesitant with incorporating differentiation into their classroom.

Bangel, Moon, and Capobiano (2010) conducted a study with pre-service teachers designing their practicum experiences with gifted students using a 9-week online training model to accompany the field experiences. Participants perceived an increase in their understanding of the needs and characteristics of gifted students through participation in the interventions as well as increased confidence in their general teaching abilities (Bangel et al., 2010). Berman, Schultz, and Weber (2012) found that including one course focusing on the needs and characteristics of gifted learners in a general education program still lacked in providing awareness about the nature and needs of gifted learners. In this study, many pre-service teachers enrolled in the course generalized that gifted children in their classrooms are viewed as peer-tutors candidates who have advanced beyond the current material (Berman et al., 2012, p. 24). Berman et al., (2012) concluded that teacher education programs must include coursework and experiences

focused on the development of gifted learners to overcome common misconceptions, so that these students' needs will be met in the general education classroom. These needs include engaging in rigorous, authentic experiences that meet and/or exceed the ability levels of the students, intentionally differentiating for students who are academically advanced.

In the scant sample of studies conducted with pre-service teachers and high-ability students, these studies failed to focus explicitly on low-income students from underrepresented backgrounds. Teachers have not been prepared to adequately address, understand, or work with this diversity in general, and particularly when a talent identification layer has been included (Ford, 1998; Ford & Grantham, 2003; Gay, 2000; Ladson-Billings, 1995, 2014; Sleeter & Grant, 1994). Furthermore, this gap in the literature and limited empirical studies demonstrates a strong need for researchers to focus on what pre-service teachers know and perceive regarding high-ability, underserved students, as well as develop instruments to use to assess their knowledge and attitudes towards this population. With issues of underrepresentation in gifted programs, it would behoove gifted and teacher education researchers to focus on the knowledge base and attitudes pre-services teachers have about the cultural understanding and awareness, curriculum, assessment, and pedagogical methods and strategies to meet the needs of high-ability, underserved students. The question then becomes, how do researchers and scholars in gifted education, as well as those charting teacher preparation programs, identify what teachers know about inclusive talent identification and development practices for underserved students?

Purpose of the Study

This study involved the development of an instrument, Inclusive Talent Identification and Development Questionnaire (ITID-Q), focused on measuring teachers' knowledge and attitudes regarding inclusive talent identification and development. The purpose of this study was to

develop and provide initial evidence for the content validity of ITID-Q, assessing pre-service teachers' knowledge of the appropriate talent identification and talent development strategies to use when working with low-income, underserved youth. Due to the limited understanding the field has regarding teachers' knowledge of inclusive talent identification and development practices and methods, it is imperative to design a research-based instrument that hones in on evidenced-based strategies and practices that have fared well with low-income underserved youth, as well as capture those deficit-oriented practices and ideologies that many educators ascribe to this population.

After completing a thorough search of scholarly databases (Education Research Complete, ERIC, and PsycINFO) and examining the literature on pre-service teacher training preparation programs and teacher training in gifted education, salient themes such as the lack of adequate training in multiculturalism and gifted education were apparent. Although there is more literature and research on in-service teachers, much of that literature centers on the lack of cultural synchronization, deficit thinking, and inadequate referrals for culturally and linguistically diverse students (Ford, 2013; Frasier, 1997; Konstantopoulous, Modi, & Hedge, 2001; Williams, 2007). Educators working with underserved students must understand that their students' talent manifests in nontraditional ways, and because of this unique manifestation, adaptations to the curriculum, assessments, and pedagogical approach must happen in order for students to reach their full potential (Ford, 2013; Mattai, Wagle & Williams, 2010; Renzulli, 2005). Therefore, it is of great importance that we study where the initial struggle of recognizing talent among underserved students begins, is it with the person (pre-service teacher), the training, or a combination of the two, through a validated measure.

The operational definition of talent development has evolved and is typically open to several interpretations. For this review, Gagné's (2004) Differentiated Model of Giftedness and Talent (DMGT), is the framework used to describe talent development of gifts and abilities. DMGT is a holistic, theoretical talent development framework that emphasizes the importance of context, natural aptitudes, and developed abilities. According to Gagné (2004), giftedness designates the possession and use of untrained and spontaneously expressed natural abilities (called outstanding aptitudes or gifts), in at least one ability domain, to a degree that places an individual at least among the top 10 percent of same-aged peers. Gagné (2004) also expressed that talent designates the outstanding mastery of systematically developed abilities (or skills) and knowledge in at least one field of human activity to a degree that places an individual at least among the top 10 percent of age peers who are or have been active in that field or fields. According to his definitions of gifts and talents, Gagné (2004) proposed that giftedness is the potential or aptitude within an individual, and that this can be developed into talent by environmental and other factors. In this model, the informal/formal learning processes and practicing that occur, can be combined with environmental catalysts to transform natural skills into developed talent (Gagné, 2004).

Examining pre-service teachers' beliefs regarding school policies, home-school connection, and classroom practices that leads to progressive transformation of natural abilities (gifts) into knowledge and skills (talent) or fails to extend the natural gifts and talents of the student and inevitably hinders the process. The following question was explored through this study:

1. How do gifted experts define "best inclusive diversity practice" for low-income, high-ability youth?

Methodology

Questionnaire development. Previous researchers have commented on the usefulness of questionnaires for collecting different types of data related to background and demographic information, behavior, attitude and opinions, knowledge, and intention or expectation information (Breakwell, Hammond, & Fife-Schaw, 1994; DeVellis, 2016). After scouring multiple scales and questionnaires, the researcher failed to find an instrument capable of measuring the underlying knowledge and attitudes the researcher sought to examine. Specifically, I desired to measure the attitudes and knowledge pre-service educators possess-information regarding the practices aimed towards talent development and identification of low income, high-ability, and underserved youth. The attitudes and knowledge mentioned, is knowledge about underserved youth with high-ability, and their attitudes regarding the traits, aptitudes, and behaviors of the students. This questionnaire was generated due to the absence of a current commercial instrument comprised of items aligned to knowledge and attitudes of pre-service teachers- items capable of measuring candidate's knowledge regarding inclusive talent development practices for low-income, underrepresented youth. The instrument developed is needed to yield response data that will facilitate accurate inferences regarding the "talent identification/talent development" ability level of the pre-service educators when working with low-income, underserved youth.

The development of this questionnaire followed the common tradition of survey developers and researchers. According to Rubio, Berg-Weger, Tebb, Lee & Rauch, 2003, questionnaire content validation procedures involve multiple steps: (a) conduct a literature review to define the construct and draft items; (b) select a panel of experts (content and lay

experts); (c) solicit experts' participation; (d) analyze the data using a factorial analysis; and (e) revise the measure (pp. 98-100).

Item Generation. The literature around the underrepresentation of low-income, underserved youth, indicates several factors that affect an educator's perception of these students (Ford, 2013; Ford & Grantham, 2003; Ford, Moore & Milner, 2005; Frasier, 1991; McGee, 2006; Olszewski-Kubilius & Clarenbach, 2012; Renzulli & Reis, 2012). Based on the themes that emerged in the literature as being influential towards talent development practices and identification, items were developed to assess pre-service teachers' knowledge and attitudes of (a) assessment, (b) attitudes associated with deficit thinking, (c) culturally competent teaching and practices, and (d) referral practices. These factors were based on the review of literature in gifted education and multicultural education regarding teacher training, culturally competent practices, and issues of underrepresentation of culturally, linguistically, and economically disadvantaged students. Standards from Ford's (2011) *Multicultural Program Evaluation Guidelines and Checklist* and National Association for Gifted Children (NAGC) Gifted Standards (2012) acted as a guide to develop items regarding the environment and practices that positively affect the talent development of underserved youth, along with Frasier (1997) work on the assessment, access, attitudes, and accommodations (adaptations). Ford and Grantham's (2003) deficit-oriented attitudes and views towards culturally diverse students were used to create items that leaned towards misconceptions and myths of the needs of this population. Siwatu's (2006) *Culturally Responsive Teaching Competencies* was also used as a device to craft items from a culturally responsive perspective.

The item pool for the instrument was based extensively on the multicultural gifted education literature related to issues of talent development and talent identification, and how they

relate to the underrepresentation of culturally, linguistically, and economically different students. The information was analyzed and instrument items that assessed the aspect/domain of tasks/strategies/methods were extracted, pooled, and 35-items generated. Items related to misconceptions regarding students of color, low-income, and culturally different students were crafted that are believed to align with assumptions educators have regarding these groups. This instrument was designed for use by pre-service and in-service teachers, and the format and design of the scale aimed to be developmentally appropriate for this group.

In the development of the items, close attention was paid to reducing social desirability bias. Social desirability bias is the systematic error in self-report measures that results from the desire of respondents to project a favorable image to the researcher (DeVellis, 2016; Fisher & Tellis, 1997). In order to address the participants' disposition to lean towards social desirability, both positively and negatively worded strategies were included in the item development to make accurate predictions of the respondent's attitudes and knowledge. The researcher utilized indirect questioning in order to decrease the likelihood of social desirability bias (Fisher & Tellis, 1997). Likert-scaled items were used with a range of 0-5 for every instrument item, the level of importance frequency scale was used, 0= not of importance, 5= of great importance, and these items are outlined in Table 1 with researchers hypothesized alignment with constructs.

Instrument structure: The use of scenarios. In order to present a case of the school's environmental context, a scenario was crafted to provide a frame of reference for participants taking the survey. Scenarios have been frequently used in survey research as an attempt to understand motivating factors of emotions, behaviors, needs, and values (Hutchins, 1975). These scenarios are often referred to as vignettes, and are experimentally controlled by the researcher; these scenarios selectively portray aspects of reality to which participants are asked to respond

(Encyclopedia of Survey Research Methods, 2008). The participants are charged with addressing underrepresentation of students on their campus, and should identify practices that will have a positive effect on students. Based on the theory of talent identification and development (Gagne, 2004) used in the construction of the *Inclusive Talent Identification and Development Questionnaire* (ITID-Q), a hypothesized 3-factor model in Figure 1 outlines the *a priori* model of the instrument.

Table 3.1

Inclusive Talent Identification and Development Questionnaire (ITID-Q) Items

Questionnaire Item	Hypothesized Construct
Q1: How important is it that achievement/intelligence tests be used as the primary source in the gifted identification process for students?	Historical
Q2: How important is it that the curriculum maintain a “scripted” approach?	Talent Development
Q3: How important is it that a student conforms to peer group expectations/norms?	Talent Identification
Q4: How important is it that a teacher make time available for students to pursue self-selected interests?	Talent Development
Q5: How important is it that creativity be included in the gifted identification process for students?	Historical
Q6: How important is it that a student exhibit curiosity and ask questions?	Historical
Q7: How important is it that a student exhibits a strong sense of social justice and question authority around equity?	Talent Identification
Q8: How important is to identify students early for gifted services?	Historical
Q9: How important is it for teachers to understand how gifted behaviors manifest across various income groups?	Talent Identification
Q10: How important is it for teachers to understand how gifted behaviors manifest across various income groups?	Talent Identification
Q11: How important is it that the curriculum and strategies used reflects students’ learning preferences?	Talent Development
Q12: How important is it to include checklists in the gifted identification process for students?	Historical
Q13: How important is it that students engage in alternative processes and critical thinking?	Talent Development

Q14: How important is it that student demonstrates above-average ability in the gifted identification process?	Historical
Q15: How important is it to understand the cultural backgrounds of a student in the gifted identification process?	Talent Identification
Q16: How important is it to involve the parents in the gifted identification process for students?	Talent Identification
Q17: How important is a student's behavior and social interactions in the gifted identification process?	Talent Identification
Q18: How important is socio-economic status in the gifted identification process of the students?	Talent Identification
Q19: How important is a student's special education status in the gifted identification process?	Talent Identification
Q20: How important is a student's motivation in starting new tasks and learning new concepts in the gifted identification process?	Talent Development
Q21: How important is it that a student perform well on regular classroom curriculum (grades, standardized tests, etc.)?	Historical
Q22: How important is multiple criteria (IQ/achievement, creativity, leadership, motivation) in the gifted identification process?	Talent Identification
Q23: How important is it to ONLY include teacher nominations, referrals, and checklists to identify students for gifted services?	Talent Identification
Q24: How important is it that teachers have training in multicultural education?	Talent Development
Q25: How important is it that a teacher observes students in various settings to note manifestations of advanced abilities?	Talent Identification
Q26: How important is it that a teacher to allow for creativity to be demonstrated in a positive or negative manner?	Talent Development
Q27: How important is it that teachers have training in gifted education?	Talent Development
Q28: How important is it to that the curriculum is relevant to the culture and heritage of the school's population?	Talent Development
Q29: How important is it create colorblind interactions when working with students?	Talent Development
Q30: How important is it that teachers require the use of standard English language?	Talent Development
Q31: How important is it for students to critique social and cultural concepts and themes?	Talent Development
Q32: How important is it to accept several ways for students to express themselves orally and in the written form?	Talent Development
Q33: How important is it that a student follows classroom rules and expectations in the gifted identification process?	Talent Identification

Q34: How important is it that teachers understand their own culture and heritage?

Historical

Q35: How important is it that teachers critique social and cultural concepts and themes, in current and past events?

Historical

Three constructs are being estimated and tested in the CFA model: talent identification, talent development, and historical classifications. Practices (effective or ineffective) for talent development refers to classroom practices that leads to progressive transformation of outstanding natural abilities (gifts) into outstanding knowledge and skills (talent) [facilitate the process] or fails to extend the natural gifts and talents of the student [hinders the process]. Practices associated with talent identification refer to classroom practices that provide opportunities for students to demonstrate abilities/knowledge/skills of students in positive or negative ways in order to refer students for gifted education. Lastly, historical classifications refer to common associations of giftedness without considerations to the culture, socio-economic status, or language of the student.

<i>Constructs Operationalized</i>
Talent Development: Refers to classroom practices that lead to progressive transformation of outstanding natural abilities (gifts) into outstanding knowledge and skills (talent) [facilitate the process].
Talent Identification: Refers to classroom practices that provide opportunities for students to demonstrate abilities/knowledge/skills of students in positive or negative ways, in order to refer students for gifted education.
Historical Classifications: Refers to common associations of giftedness without considerations to the culture, socio-economic status, or language of the student.

*Figure 3.1.*Constructs Operationalized. The constructs of the theoretical model defined: talent development, talent identification, and historical classifications.

Establishing knowledge standards. The responses of the experts were used to define what acceptable criteria should be, expressing a standard for the pre-service teachers, essentially a summative score. The standard summative score will encapsulate knowledge, attitude, and appropriate practices of pre-service, estimating the level of “effectiveness” in order to work with low-income, underserved students. If a pre-service teacher meets the standard score, this individual essentially has a handle or command of inclusive talent development practices. The expert will outline a point/score of what would be appropriate practices for a teacher, basically classifying a range of poor, acceptable, and excellent by way of knowledge and attitude towards inclusive talent development practices. For example, if the standard score an expert defines a 23 as a good score, the pre-service teacher’s score will be compared to that defined score. If the pre-service teachers score well below the “good/acceptable” score, there clearly needs to be more training and preparation for the student. Each experts provided a baseline acceptable score for pre-service teachers. Following the expert review, a range of an acceptable score was provided.

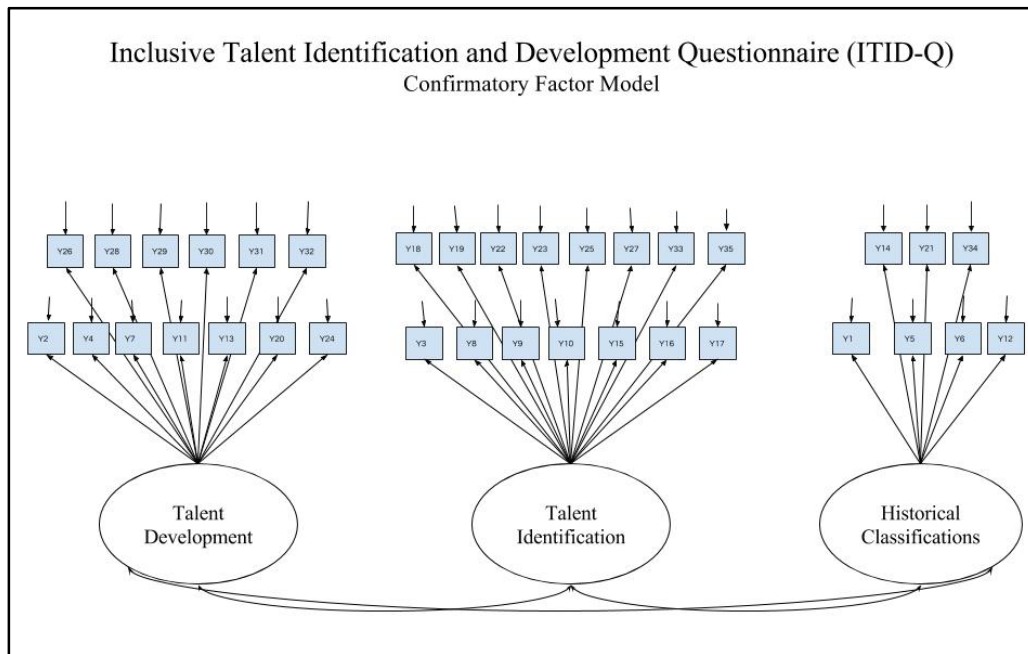


Figure 3.2. A priori Confirmatory Factor Analysis factor diagram of ITID-Q constructs: talent development, talent identification, and historical classifications.

Questionnaire validity and reliability.

Content validity. In most studies, researchers study complex constructs for which valid and reliable instruments are needed (Rubio et al., 2003). Content validity studies provide information on the representation and clarity of each item, and in turn provides a preliminary analysis of the factorial validity (Rubio et al., 2003). Methodologists recommend that in content validation studies, a panel should evaluate and recommend expert views to establish items (Rubio et al., 2003), which in this study centers on the best inclusive talent identification and development practices to use with underserved students. Rubio et al. (2003), suggest a panel of experts to consist of content and lay experts, and the panel should consist of at minimum six individuals. However, the number of panel experts depends on the desired level of expertise and diversity of knowledge (Gable & Wolf, 1993; Rubio et.al., 2003; Waltz, Strickland & Lenz, 1991). It is important to note that experts' feedback is subjective; therefore, the study is subjected to bias that may exist among the experts.

Experts in gifted education served as external reviewers; this sample of experts were selected based on their research and productivity within gifted education field, specifically with culturally and linguistically diverse students from economically disadvantaged backgrounds. Seven experts (i.e., professors, teachers, and a district level administrator) chose to participate, and evaluated the relevance, technical quality, and representativeness of general historical classification items, talent development items, and talent identification items that are specific to low-income, underserved youth. The panel recommended and evaluated the items, which comprised of the best evidence-based talent identification and development practices to use with underserved students. Following recommendations from Netemeyer, Bearden, and Sharma (2003), the experts evaluated the content of the items to see if they agree with the theoretical

structure, and aligning the items with the constructs. The experts also were asked to judge the importance of each statement based on the positive or negative nature of the question in reference to best practices with low-income, underserved youth. The experts rated each statement in respect to how strongly they felt it should be included in the questionnaire, and also had the option to submit recommendations or reject the item all together. Their ratings were based on a three-point scale that ranged from 1 (accept), to 2 (revise), to 3 (reject). Subsequently, these recommendations served as the inventory performance benchmark. That is, the performance of pre-service educators will be compared to the appropriate practices identified by the content experts. Aside from making suggestions or recommendations for said items, they were also asked to suggest modifications for the individual items (e.g., language, grammatical corrections).

Coefficient alpha *if item deleted* will be used to evaluate each item measuring its respective construct. If coefficient alpha increases when an item is deleted, and the expert committee has not deemed the item “essential,” that item will be removed. Reverse presentation of items will be used. This presents the item in the contrasting direction. The reverse presentation practice facilitates the detection of unengaged participants. The reverse scoring affects the alpha, and are important for reducing response bias (Fields, 2005). The following items have been reverse coded: Item 25, Item 28.

Data Collection and Analysis

For the pilot of ITID-Q, in-service teachers were recruited and provided electronic consent to participate in the validation of the study. According to Bollen (1989), 10 observations per estimated parameter should be considered for population sample, with a minimum of 200 observations. This study has a sample of 125 in-service teachers in the Southeastern U.S. Of the valid data participants, 90.2% were female and 9.8% male, with the median age range being 30-

39. Participants' described themselves as White (59.6%), African American (20.2%), Multiracial (8.8%), Latino/a (5.3%), Asian/Pacific Islander (4.4%), and other (1.8%). From this sample of valid data, 89.5% received gifted education training (professional development, graduate/undergraduate level courses, etc.), and 90.4% had received multicultural education training (professional development, graduate/undergraduate level courses, etc.) prior to taking the questionnaire. Within the sample, 50% of participants had been gifted identified and received services as a student in either elementary, middle, or high school. Participation in this study was on a voluntary basis, and participants were not compensated for their completion of the survey.

Procedures for data analysis. The purpose of Structural Equation Modeling (SEM) is to test a hypothesized model statistically, using a system of variables to establish the extent to which the bevy of variables are consistent with the data (Byrne, 2012). If the hypothesized model has a goodness-of-fit, “the model argues for the plausibility of postulated relations among variables; if it is inadequate, the tenability of such relations is rejected” (Byrne, 2012). Because of its *a priori* approach, SEM is appropriate and useful for inferential purposes (Byrne, 2012). SEM also specifies conditions to correct for measurement error; in addition, structural equation modeling explicitly provides estimates of these error parameters. SEM is particularly helpful for those studying observed and latent variables. For my purposes, SEM provides a manner to conduct nonexperimental research to study theoretical constructs associated with attitudes associated with marginalized populations that cannot be observed directly.

Confirmatory Factor Analysis (CFA), which is a type of SEM and often referred to as a measurement model, tests whether a specified set of constructs is influencing responses in a predicted way, essentially studying how well a hypothesized factor model fits empirical data (Lu, 2016). The instrument is being developed based on the literature, my hypotheses, and the

expertise of my panel. Therefore, CFA is used to determine if the theoretical structure holds for response data obtained from pre-service teachers, acknowledging from the outset that there is a difference in the knowledge base of pre-service teachers and the expert panel. Confirmatory factor analysis allows for estimates of direct effects (factor loadings), and these factor loadings are analyzed and interpreted using regression coefficients, lending insight to effect indicators (Kline, 2015). CFA provides results that include estimates of factor variance and covariances, loadings of indicators on their respective factors, and the amount of measurement error for each indicator (Kline, 2015).

CFA typically has designs for construct validation and scale refinement, multitrait-multimethod validation, and measurement invariance and has been used in multiple disciplines (MacCallum & Austin, 2000). This model is over-identified, meaning there are fewer unknowns than pieces of information with which to estimate them (Brown, 2015). When the model is over-identified, the “goodness of fit” can be evaluated and it is possible to test how well the model reproduces the input variance covariance matrix (Brown, 2015).

Results

ITID-Q Data and Item Review. Table 3.2 shows the alignment across the total number of items the expert panel reviewed the Inclusive Talent Identification and Development Questionnaire (ITID-Q). The table shows the number of items: (1) accepted without further revisions (Accept as is); (2) with suggested revisions (Revise); or, (3) rejected (Reject). Each item was analyzed based on agreement levels indicated by the experts.

Table 3.2

ITID-Q Expert Committee Data and Item Review

	Accept (as is) Percent of Items	Revise Percent of Items	Reject Percent of Items
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Questionnaire Item			
Item 1	71% (5)	29% (2)	0% (0)
Item 2	14% (1)	72% (5)	14% (1)
Item 3	71% (4)	14% (1)	14% (2)
Item 4	100% (7)	0% (0)	0% (0)
Item 5	86% (6)	14% (1)	0% (0)
Item 6	86% (6)	14% (1)	0% (0)
Item 7	71% (5)	29% (2)	0% (0)
Item 8	100% (7)	0% (0)	0% (0)
Item 9	100% (7)	0% (0)	0% (0)
Item 10	100% (7)	0% (0)	0% (0)
Item 11	100% (7)	0% (0)	0% (0)
Item 12	100% (7)	0% (0)	0% (0)
Item 13	86% (6)	14% (1)	0% (0)
Item 14	86% (6)	14% (1)	0% (0)
Item 15	86% (6)	14% (1)	0% (0)
Item 16	100% (7)	0% (0)	0% (0)
Item 17	86% (6)	14% (1)	0% (0)
Item 18	100% (7)	0% (0)	0% (0)
Item 19	100% (7)	0% (0)	0% (0)
Item 20	100% (7)	0% (0)	0% (0)
Item 21	100% (7)	0% (1)	0% (0)
Item 22	100% (7)	0% (0)	0% (0)
Item 23	71% (5)	14% (1)	14% (1)
Item 24	100% (7)	0% (0)	0% (0)
Item 25	100% (7)	0% (0)	0% (0)
Item 26	86% (6)	14% (1)	0% (0)
Item 27	100% (7)	0% (0)	0% (0)
Item 28	86% (6)	14% (1)	0% (0)
Item 29	86% (6)	0% (0)	14% (1)
Item 30	71% (5)	14% (1)	14% (1)
Item 31	100% (7)	0% (0)	0% (0)
Item 32	100% (7)	0% (0)	0% (0)
Item 33	71% (5)	14% (1)	14% (1)
Item 34	100% (7)	0% (0)	0% (0)
Item 35	100% (7)	0% (0)	0% (0)

Based on the agreement levels of the experts and suggested modifications, Item 2 (scripted curricular approach) was deleted from the questionnaire. Items that the experts asked to be revised were revised before the pilot was distributed to participants. The items that were revised per the suggestions of the experts, making the instrument 34 items to be measured, and is noted in Appendix A.

Experts were also asked to assign each item to a domain- historical classifications, talent identification, and talent development. In assigning the items to the domains, there lacked

consensus across the expert committee on the which domains these items belonged to, despite using the theory from our field to guide the domains.

Establishing the Diversity Score. The responses of the experts were used to define what acceptable criteria should be, expressing a standard for the pre-service teachers, essentially providing a summative range. The standard composite score will encapsulate knowledge, attitude, and appropriate practices of pre-service, estimating the level of “effectiveness” in order to work with low-income, underserved students, defining that effectiveness.

Table 3.3

ITID-Q Composite Diversity Score

Composite Score Ranking	Range
Developing	0-20
Competent	21-28
Exemplary	29-34

Instrument pilot. In order to pilot the instrument, in-service teachers were recruited, targeting at least 200 teachers to participate, which is considered a “moderately sized” sample (Kline, 2005), but less than the 10 observations per parameter as suggested by Bollen (1989). Several sessions were attended for participants to complete the questionnaire, in an effort to clarify items, observe, and answer any outstanding questions regarding the instrument. The pilot study served as a way to provide useful information regarding (1) how long it takes an individual to complete the questionnaire, (2) the degree of consensus regarding item interpretation, and (3) obtain additional feedback regarding the layout and questions. Following the survey completion, participants were asked questions about the overall feel of the instrument, if they needed points clarified, etc. After the completion of pilot testing, patterns in the feedback and responses were

observed. Initially, the survey was slated to take 30 minutes for participants to complete, but after several pilot sessions, the average time it took participants to finish was 10-15 minutes.

Initial Confirmatory Factor Analysis. A few problems were identified in the data collection and preliminary analysis of the ITID-Q scale: small sample size, significant amount of missing data, and non-normal distributions. These related problems arose partly due to the item to sample size ratio. First, there were 34 items to be measured, the actual sample size of the ITID-Q data (N=175) is below the minimum sample size required to perform factor analysis (Bollen, 1989). Because of significant missing data, deletion of cases was adopted, dropping the number of cases to (N=125). This total number was dropped due to individuals failing to attempt or complete the survey; individuals who completed at least 37% of the survey were included in the sample. Lastly, conducting a factor analysis on the current dataset violated the normality assumption because the distributions of many items were significantly skewed; many reported rather high on several items, rating Likert items as 4s or 5s. However, this is commonly found in the use of Likert scales, and is considered to be acceptable to serve the purpose of the study as an exploratory pilot of different observation instruments (Ko & Sammons, 2008).

The specification of the model was over-identified, each latent variable was scaled, with the path coefficient for one observed variable being set to “1” for each latent variable. The over-identified model equation formula:

$$a = p(p + 1) / 2$$

To define the formula, a is the number of elements in the input matrix, and p is the number of indicators included in the input matrix (Brown, 2015).

$$a = 34(34 + 1) / 2 = 595$$

The analysis estimated the model as Marginal Likelihood. Upon the initial analysis, the data

produced an improper solution. An improper solution exists when a factor model does not converge on a final set of parameter estimates, or produces an out-of-range estimate (Brown, 2015, p. 19). With MPlus producing an improper solution or lack of convergence, there was a sign of a significant problem.

Finding the parameter estimates for an over-identified CFA model is an iterative procedure. Convergence of the model is reached when the program arrives at a set of parameter estimates that cannot be improved upon to further reduce the difference between Σ and S (Brown, 2015, p. 63). On occasion, a latent variable solution will fail to converge, and is often related to the complexity and quality of the model specification, and the adequacy of the starting values (Brown, 2015). Research methodologists suggest increasing the maximum number of iterations to rectify a convergence problem (Brown, 2015). In troubleshooting, the researcher changed the number of iterations to 10,000 compared to the convergence default of 1000, yet the model still failed to converge. The solution also contained Heywood cases. Heywood cases refer to parameter estimates that have out-of-range values such as negative indicator error variances (Brown, 2014, p. 61). These negative error variances were also a factor of the nonconvergence.

Discussion

With the initial Confirmatory Factor Analysis (CFA), it was concluded that the data would not be a good fit for this type of analysis. The purpose of Structural Equation Modeling (SEM) is to test a hypothesized model statistically, using a system of variables to establish the extent to which the bevy of variables are consistent with the data (Byrne, 2012). If the hypothesized model has a goodness-of-fit, “the model argues for the plausibility of postulated relations among variables; if it is inadequate, the tenability of such relations is rejected” (Byrne, 2012). With the original theory guiding the model, the theoretical structure used did not hold,

based on the response data obtained from teachers. Confirmatory Factor Analysis is the preferred choice to complete analysis based on theory, but for this data and its constraints, CFA was not able to be used. Due to the lack of convergence, the analyses will need to be revisited, and more exploratory in nature. Problems often arise with smaller sample sizes, and often work in concert with other problems to create model estimation difficulties (Brown, 2015). Anderson and Gerbing (1984) reported that sample size will possibly interact with other aspects of the model to affect the risk for improper solutions. Based on the sample size and the fact that the theory did not hold, the researcher will re-analyze the data using Principal Component Analysis (PCA). The researcher will identify items that can be removed, and reduce the number of items based on a lack of variability in many of the participants' responses in the subsequent analyses.

The author believes that the structure and common understanding of the structure of the instrument was misjudged on several levels. The author misjudged their ability to fully relay the instrument development and CFA process to the expert committee, despite providing an informational document to assist in understanding the process. The researcher thinks with a process such as this, a video or Google Hangout meeting discussing the process instead of a document may have been more helpful, although a document detailing the procedure was provided. There the experts would have the opportunity to hear the details and complete the process as a collective group. The experts would be able to complete the survey, have discussion with the other committee members, and come to consensus on the domain alignment. The author does not regret starting with theory to guide the instrument development, despite the model failure. The author still believes the analysis and results will still be interesting and assist in helping the field to understand the knowledge and attitudes of teachers, despite reverting to a Principal Component Analysis. Because the researcher misjudged the stability of the instrument,

the instrument will benefit from returning to a preliminary developmental stage, where the empirical data will facilitate the revisions and developmental efforts in creating a more refined scale.

Implications for Future Research

Based on the issues the expert panel encountered regarding the domain alignment, the researcher wants to further explore the how experts view and process the theory in our field. Despite the model failing to converge, there was a great deal learned about the potential gaps we may have in the field regarding our alignment with theory and practice. As mentioned in the discussion, using a different committee approach with the researchers is needed, and it would be interesting to observe how many rounds it would take for the experts to come to consensus, and even if there is agreement. This would definitely be more of a mixed-methods approach to understand the thought processes of the experts, as well as their understanding of methodological approaches in the field. Essentially, helping the experts understand that there was an agreement on the items, however, they failed to agree on the domain alignment, and what does that mean for our field. Addressing this issue could have an effect on future instrument development and other methodologically-driven studies conducted in multicultural gifted education.

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CHAPTER 4
REVISITING THE DEVELOPMENT AND VALIDATION OF INCLUSIVE TALENT
IDENTIFICATION AND DEVELOPMENT
QUESTIONNAIRE (ITID-Q)³

³ Anderson, B. N. *To be submitted to Gifted Education Quarterly*

Abstract

Identifying factors contributing to the underrepresentation of culturally and linguistically diverse students, in addition to implementing solutions, continue to stymie educators, administrators, and practitioners. The focus of the article is the validation of an instrument, Inclusive Talent Identification and Development (ITID-Q) to assess educators knowledge of best-practices and their attitudes towards high-ability, underserved youth. Through the use of Principal Component Analysis (PCA), it was determined that five factors should be retained. The instrument hold promise because it may be used to assess knowledge gaps and deficit model that will continue to contribute to under identify and recognize the talent of students from culturally, linguistically, and economically diverse backgrounds.

Keywords: talent development, talent identification, underserved students, gifted education, high-ability students, teacher preparation, teacher training, principal component analysis, Inclusive Talent Identification and Development-Questionnaire (ITID-Q)

Introduction

Identifying factors contributing to the underrepresentation of culturally and linguistically diverse students, in addition to implementing solutions, continue to stymie educators, administrators, and practitioners. Various solutions have been proposed and discussed (Renzulli, 2004), yet there is limited research on implementing these solutions and observing the effects. Manifestations of talent vary depending on the culture, socioeconomic status, and language used by students (Frasier, 1997). Some students readily demonstrate their gifts, but for others, the demonstration of their gifts and talents may not be recognized in a traditional sense or easily observed (Ford, 2013). Intersections of contextual influences such as economic status, culture, and language impact learning and how we perceive our students; without proper training or awareness of how contextual influences impact learning, teachers and counselors may potentially overlook students for identification. If educators continue to exclude contextual factors from the equation of identifying students, underrepresentation of culturally, linguistically, and ethnically diverse will continue to persist.

Several educators and researchers have long debated at what point do we begin to address these concerns within specific populations. However, one must question, where did the struggle began for most teachers and how should it be addressed? Are we doing enough in teacher preparation programs to equip pre-service teachers with pedagogical tools to educate low income, high-ability students from culturally and ethnically diverse backgrounds? What do our teachers know about talent identification and talent development practices for culturally, linguistically, and economically disadvantaged students? Also, how can we equip them with the knowledge and skills to meet the needs of this very important and often overlooked population? What tools can be helpful in understanding what teachers know?

Researchers tend to develop instruments to come to a greater understanding of a construct and others develop such instruments with commercial objectives in mind. Inclusive Talent Identification and Development Questionnaire (ITID-Q) was developed to help teachers understand their perceptions of high-ability, underserved students, and in turn, adequately address any gaps in their knowledge. With educators addressing their deficit attitudes and awareness of the needs and characteristics of underserved students, we can intentionally and strategically begin to address factors associated with underrepresentation of historically underrepresented students identified for gifted services and programming.

Issues of Underrepresentation in Gifted Education

Identifying factors contributing to the underrepresentation of culturally and linguistically diverse students continue to stymie educators, administrators, and practitioners. Every report and empirical study centered on gifted education demographics reveals the disturbing finding that Black and Hispanic students are disproportionately underrepresented in gifted education (Ford, 2012). Gifted children can be found across all cultural groups and at every socioeconomic level; however, attempts to identify them have been and continue to be an issue (Ford, 1995, 2013; Frasier, 1991; Passow & Frasier, 1996; Torrance, 1968, 1972). Underserved students, particularly African American, economically disadvantaged students, and underachievers are significantly underrepresented in gifted programs, but are sorely overrepresented in special education programs for the learning disabled, behaviorally disordered, and mentally disabled (Ford, 1995).

Factors associated with underrepresentation. Ford (1995) and Frasier (1997) provided several reasons to explain the lack of representation of underserved students in gifted education. The following section will outline Ford's (1995) research and explanations for

underrepresentation, as well Frasier's (1997) summarization of problems with identification, in the Four A's framework (Access, Assessment, Accommodations, Attitudes). There will be overlap in the explanations, displaying correlations, and these explanations are widely used in the field of gifted education.

Frasier's Four A's. Frasier's (1997) Four A's framework—attitude, access, assessment, and accommodations—serve as a foundation to counter concerns of inequitable practices within a district to fit the needs of underserved students.

Attitude. Altering attitudes is by far the most crucial component of Frasier's framework. Attitude refers to the mental position, feeling or emotion towards a low-income or CLD student. In order for educators to truly recognize the potential of low-income students, combating assumptions and stereotypes about low-income communities and the families is an absolute must. The manifestation of talent in underrepresented students from low-income and CLD backgrounds will more than likely differ than that of White and middle-class populations. Remaining open and flexible is key as potential manifests in different ways. To promote equitable classrooms and programming, it is imperative to focus on the strengths of students.

Access. Recognizing gifted potential among underrepresented groups does not happen in a vacuum; several factors must intersect in order for students to develop their talent, and it begins with prioritizing access for all students to appropriately challenging and engaging learning opportunities. Frasier (1997) posited that there are several factors that limit access of low-income and CLD students for gifted programming and services: (a) low academic expectations held by educators and others; (b) low rates of referrals; (c) the inability for educators to recognize gifted behaviors when exhibited by low-income and CLD students; and (d) the lack of regard given to

the influence of culture and environment on the manifestations of gifts and talents in different racial and ethnic groups and the effects this has on teacher referrals in the identification process.

Assessment. Expanding access to gifted programs and services is intimately linked to the way in which student abilities and talents are evaluated and identified through the assessment process. A high-quality program should institute multiple criteria (e.g., creativity, leadership, achievement, mental ability, motivation), multiple measures to assess each criterion, and multiple pathways to determine eligibility for gifted program participation (Frasier, 1997). The tests used for gifted identification and services have been widely criticized and blamed for the underrepresentation of culturally, linguistically, and ethnically diverse students.

Accommodations (Adaptations). Accommodations are the program design and curriculum experiences to support the needs of low-income and CLD students (Frasier, 1997), by way of creating opportunities for students to demonstrate and develop their potential. Stimulating, engaging classrooms and programs where students have the opportunity to explore, take risks, problem solve, and think critically provides the necessary accommodations for students to be considered for gifted programming. In order to cultivate a school climate that embodies the aforementioned traits, the administrators and teachers must subscribe to the school-wide initiatives, and should include culturally relevant curriculum and alternative programming.

Ford's Factors Explaining Underrepresentation. Ford (1995) provides several reasons to explain the lack of representation of ethnic minorities in gifted education. These factors in the underrepresentation equation are as follows: definitions of giftedness, identification practices, cultural differences in learning style, the teacher's role in the recognition of giftedness, parental influence and involvement, and underachievement and giftedness. To be identified for gifted services, most school districts rely solely on norm-referenced intelligence or achievement tests as

determining factor for student placement in gifted programs (Ford, 1995). This is problematic due these tests being unidimensional, and several researchers have emphasized the importance of multidimensional, multi-modal assessment strategies (Ford, 1995). The differences in learning styles varying depending on culture; these differences have implications for gifted identification and teaching practices (Ford, 1995). Ford posits that few teachers have received extensive and continuous preparation in education that is multicultural in scope. As a result, teachers will have difficulty understanding the ways in which culturally and racially diverse groups of students manifest their talents and abilities. Correspondingly, with teachers' lack of understanding of cultural differences, the teacher will fail to recognize potential from culturally and racially diverse groups, which make them unreliable sources.

Other contextual factors. Baldwin (2011) discussed variables such as socioeconomic status, cultural diversity, social and geographic isolation, and relative perception of powerlessness, requires educators to rethink assessment and identification procedures to identify potential across these intervening variables. Contextual influences such as economic status, culture, and language impact learning and how we perceive our students. Some students readily demonstrate their gifts, but for others, the demonstration of their gifts and talents may not be recognized in a traditional sense or easily observed (Ford, 2013). Without proper training or awareness of how contextual influences impact learning, teachers and counselors may potentially overlook students for identification. If educators continue to exclude contextual factors from the equation of identifying students, underrepresentation of culturally, linguistically, and ethnically diverse will continue to persist. Recognizing gifted potential among underrepresented groups does not happen in a vacuum; several factors must intersect in order for students to develop their talent, and it begins with prioritizing access for all students to appropriately challenging and

engaging learning opportunities. Frasier (1997) posited that there are several factors that limit access of low-income and CLD students for gifted programming and services: (a) low academic expectations held by educators and others; (b) low rates of referrals; (c) the inability for educators to recognize gifted behaviors when exhibited by low-income and CLD students; and (d) the lack of regard given to the influence of culture and environment on the manifestations of gifts and talents in different racial and ethnic groups and the effects this has on teacher referrals in the identification process.

Values Literature in Gifted Education

In the book *Gifted and Advanced Black Students in Schools*, Grantham et al., (2011, pp. xiv-xv) provided several propositions regarding the underrepresentation ethnic minorities and establish the field should hold central to our programming and research:

- underrepresentation is inequitable and unnecessary;
- all groups are equally endowed in intelligence, academic ability, and creativity; thus, no group should have a monopoly on being identified and served as gifted;
- underrepresentation can decrease when the focus is on recruitment and retention;
- teachers and educators (due to low expectations and deficit thinking) are the major contributors to underrepresentation, but substantive and purposeful professional development and courses can change this;
- creative strengths reveal gifted potential;
- traditional tests and instruments are a major contributor to underrepresentation, and alternative tests and instruments can increase Black students' representation;
- policies and procedures that contribute and sustain underrepresentation must be interrogated and changed; and

- underrepresentation can be corrected.

As mentioned, expanding access to gifted programs and services is intimately linked to the way in which student abilities and talents are evaluated and identified through the assessment process. For decades, gifted education researchers and theorists have supported a broader, expanded conception of giftedness (Gardner, 1983; Renzulli, 1978; Sternberg, 1985; Torrance, 1974, 1977), and very few continue to accept an isolated IQ or achievement test score based on national norms as a valid measure of student's capacity for doing well over the course of a lifetime (Renzulli & Reis, 2012). Nevertheless, in many schools, identification for gifted programs is still heavily tied to performance on intelligence and/or achievement tests (Cross & Dockery, 2014; Renzulli & Reis, 2012). Peterson (1999, p.355) asserts, "If teachers are of the dominant culture, no matter how well intentioned they are, their cultural value orientation may interfere with referring nonmainstream children."

Cultural Styles. Passow and Frasier (1996, p.199) emphasized:

Talents of minority and economically disadvantaged students are not of a different order nor of a lower standard. By its very nature, any culture or subculture can encourage or inhibit an individual's behavior by the rewards or sanctions it provides.

Scholars have focused on the values of specific groups in terms of cultural styles and strengths and how these values affect gifted identification (Baldwin, 2011; Ford, 1995, 2011; Frasier, 1991; Passow & Frasier, 1996; Torrance, 1974). Buckley (1992) concluded that schools selected students whose family orientation and conceptions of giftedness concurred with their own: the central categories of IQ, creativity, and motivation. Splinder and Splinder (1990) found that "One's cultural background significantly influences what one will value, disvalue, and ignore (p. 68)." Ford, Harris, Tyson, and Trotman's (2002) posited that diverse students are

underrepresented in gifted education due to educators' failure to acknowledge, understand, and affirm cultural differences. Ford, Moore, and Milner (2004) also address value orientations and how these values have an effect in the identification of underrepresented students. Ford, Moore, and Milner (2004) also encouraged educators to seek extensive preparation in cultural diversity in coursework, professional development, and readings, and in turn understand that this is a lifelong process of being culturally competent.

Trotman and Ford (2011) argue that the lack of preparation with pre-service teachers on the needs and characteristics of gifted students influence how teachers will work with students and advocate for them. Candidates in teacher education programs who are ill-prepared in gifted education are likely to be ineffective at identifying and serving them in the classroom (Trotman & Ford, 2011).

Purpose of the Study

This study involves the validation of an instrument, Inclusive Talent Identification and Development Questionnaire (ITID-Q), focused on measuring teachers' knowledge and attitudes regarding inclusive talent identification and development. ITID-Q will be used to assess teachers' knowledge of the appropriate talent identification and talent development strategies to use when working with low-income, underserved youth. Due to the limited understanding the field has regarding teachers' knowledge of inclusive talent identification and development practices and methods, it is imperative to design a research-based instrument that hones in on evidenced-based strategies and practices that have fared well with low-income underserved youth, as well as capture those deficit-oriented practices and ideologies that many educators ascribe to this population. The study will explore the following questions:

- To what extent do teachers' views on "best inclusive practice" reveal about their knowledge and attitudes towards high-ability, underserved youth?
- To what extent is a teacher's personal characteristics predictive of their support of diversity and inclusion of underserved students in gifted education?

Methodology

Questionnaire Development. According to DeVellis (2016), measurement instruments are collections of items that are combined into a composite score and intended to reveal levels of theoretical variables not readily observable by direct means. A questionnaire is "a measure that presents a set of written questions to which all individuals in a sample respond" (Gall, Borg, & Gall, 1996, p. 767). Researchers have commented on the usefulness of questionnaires for collecting different types of data related to background and demographic information, behavior, attitudes and opinions, knowledge, and intention or expectation information (Breakwell, Hammond, & Fife-Schaw, 1994).

A construct validity study can provide information about the theoretical relationship of the variables to other variables (DeVellis, 2016). Construct validity helps the researcher to understand the extent to which a measure "behaves" the way that the construct it purports to measure should behave with regard to established measure of other constructs (DeVellis, 2016, p.94). According to Messick (1989), the content aspect of construct validity includes evidence of content relevance, representativeness, and technical quality. It is important for the researcher to develop an instrument which can be used by both in-service teachers and pre-service teachers to capture to what degree teachers understand their values and attitudes related to high-ability, underserved youth, as well as what knowledge they have about best-practices for this population. By using such an instrument, school personnel and administrative leaders can gauge how they

should approach training, professional development, and in teacher education programs, course content. Using an instrument to identify factors and/or misconceptions that are contributing to underrepresentation with educators is essential for the field to continue the work of making practices and approaches in the classroom equitable.

Data Collection and Analysis

Instrumentation. Inclusive Talent Identification and Development Questionnaire (ITID-Q) is an instrument designed for pre-service and in-service teachers to assess their knowledge about best inclusive practices to meet the needs of high-ability, underserved youth. The instrument hones in on evidenced-based strategies and practices that have fared well with low-income underserved youth, and also includes deficit-oriented practices and ideologies that many educators ascribe to this population to fully glean the knowledge and attitudes of educators. This instrument examines teachers' beliefs and knowledge regarding school policies, home-school connection, and classroom practices that leads to progressive transformation of natural abilities (gifts) into knowledge and skills (talent) or fails to extend the natural gifts and talents of the student and inevitably hinders the process. The item pool for the instrument was based extensively on the multicultural gifted education literature related to issues of talent development and talent identification, and how they relate to the underrepresentation of racially, economically, culturally different students. The format and design of the questionnaire includes a scenario, and teachers are tasked with identifying "best-practices" to redesign the gifted program at majority low-income school. Likert-scaled items were used with a range of 0-5 for every instrument item, the level of importance frequency scale was used, 0= not of importance, 5= of great importance, and these abbreviated items are outlined in Table 1.

Table 4.1*ITID-Q Items*

Item	
1	Achievement and Intelligence tests
2	Student conforms to peer group expectations/norms
3	Students have opportunity to pursue self-selected interests
4	Creativity included in gifted identification process
5	Students ask questions and exhibit curiosity
6	Student exhibits a strong sense of social justice
7	Students are identified early
8	Teachers understand manifestation of gifted behaviors across income group
9	Nonverbal measurements are included in gifted identification process
10	Curriculum and strategies reflect students' learning preferences
11	Checklists are included in gifted identification process
12	Students engage in alternative processes (critical and creative thinking)
13	Students demonstrate above-average ability
14	Teachers understand students cultural background(s)
15	Parents involvement in gifted identification process
16	Student's behavior and social interactions
17	Teachers consider socioeconomic status in curricular approach
18	Student's special education status
19	Students' motivation in starting new tasks and learning concepts
20	Student performance (grades, standardized tests, etc.)
21	Multiple criteria (IQ, achievement, leadership, motivation)
22	Only include teacher referrals and nominations in identification process
23	Teachers have multicultural education training
24	Teacher observes students in various settings
25	Teachers allows for creativity to be demonstrated in positive and negative ways
26	Teachers have gifted education training
27	Curriculum is relevant to the culture and heritage of the school's population
28	Operate in a colorblind approach
29	Teachers require use of mainstream English
30	Students critique social and cultural themes and concepts
31	Teachers accept several ways for student to express themselves
32	Student follows classroom and expectations
33	Teachers understand their culture and heritage
34	Teachers critique social and cultural concepts and themes

Note. These items are abbreviated, and are related to the gifted identification process.

Principal Component Analysis (PCA). Principal Component Analysis (PCA) is a statistical procedure utilized to investigate the actual number of components that an instrument

will yield; PCA is a common statistical procedure used for identifying clusters of variables (Fields, 2013). PCA is a “variable reduction technique used when variables are highly correlated and it reduces the number of observed variables to a smaller number of principal components which account for most of the variance of the observed variables” (Suhr, 2005, p. 1). According to Fields (2013), the main uses of this technique are as follows: “(1) to understand the structure of the set of variables; (2) to construct a questionnaire to measure an underlying variable; and (3) to reduce a data set to a more manageable size while retaining as much of the original information as possible (p. 686).” The goals of PCA are to (a) extract the most important information from the data tables, (b) compress the size of the data set by keeping only this important information, (c) simplify the description of the data set, and (d) analyze the structure of the observations and the variables (Abdi & Williams, 2010, p.3)

PCA explores the data to see which of the components account for most of the variation in the original data (Chatfield & Collins, 1980). Essentially, if the original variables are highly correlated, they are effectively ‘saying the same thing’ and there may be near-linear constraints on the variables (Chatfield & Collins, 1980, p. 57). These components are meaningful and help us to understand the data better, and will be useful in subsequent analyses with a smaller number of variables. PCA establishes which linear components exists within the data and how a particular variable might contribute to that component (Fields, 2013, p. 675).

Participants. For the pilot of ITID-Q, in-service teachers were recruited and provided electronic consent to participate in the validation of the study. This study has a sample of 125 in-service teachers in the Southeastern U.S. Of the valid data participants, 90.2% female and 9.8% male, with the median age range being 30-39. Participants’ described themselves as White (59.6%), African American (20.2%), Multiracial (8.8%), Latino/a (5.3%), Asian/Pacific Islander

(4.4%), and other (1.8%). From this sample of valid data, 89.5% received gifted education training (professional development, graduate/undergraduate level courses, etc.), and 90.4% had received multicultural education training (professional development, graduate/undergraduate level courses, etc.) prior to taking the questionnaire. Within the sample, 50% of participants had been gifted identified and received services as a student in either elementary, middle, or high school. Participation in this study was on a voluntary basis, and participants were not compensated for their completion of the survey.

Results

The statistical procedure used to investigate the number of components that the ITID-Q would yield was Principal Component Analysis (PCA). Data was analyzed using IBM SPSS 22. Before conducting the analysis, it was important to identify whether the assumptions held for the analysis. In order to identify whether the assumptions held, the items were analyzed test for sampling adequacy using the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's test of Sphericity for correlations on the 34 items of the instrument. The KMO statistic varies between 0 and 1; a value of 0 is an indication that there is a diffusion in the pattern of correlations, and factoring is inappropriate, and a value close to 1 indicates that factor analysis should yield distinct and reliable factors (Field, 2013). As recommended by Kaiser (1974), the researcher should accept values greater than .5, and the Kaiser Meyer Olkin (KMO) measure appeared to be sufficient (.758). Bartlett's test of Sphericity provides information on whether the observed correlation matrix is significantly different from the identity matrix, and between the variables the overall difference should be significant (Fields, 2013). The Bartlett's test of Sphericity ($\chi^2 (125) = 1216.47, p < .001$) and proved that correlations between items were large enough to conduct a principal component analysis. For this study, the researcher retained

items with a KMO greater than .6. The general rule of thumb for interpreting the KMO statistic is any value less than 0.6 indicates the sampling is not adequate and that remedial action should be taken (Kaiser, 1974). For reference Kaiser (1974) provides levels for these values, 0.00 to 0.49 (unacceptable), 0.50 to 0.59 (miserable), 0.60 to 0.69 (mediocre), 0.70 to 0.79 middling, 0.80 to 0.89 (meritorious), and 0.90 to 1.00 (marvelous). Based on the KMO statistic, six items fell below .6, and were deleted from the instrument. Retaining KMO greater than .6 Table 4.2 includes the items deleted from the instrument, and the Anti-Image Correlations Matrix is included in the Appendix B.

Table 4.2.

Items deleted based on KMO test statistic

Item	
5	Students ask questions and exhibit curiosity
11	Includes checklists from students, parents, and teachers
19	Student motivation in starting new tasks
21	Multiple criteria (IQ, achievement, leadership, motivation)
26	Teachers have gifted education training
28	Operate in a colorblind approach

Note. KMO statistic <.6 were removed

The researcher performed a principal component analysis with Varimax rotation for the 28 items. The number of factors retained by the researcher was guided by the Cattell Scree-plot Test (Cattell, 1966) and Eigenvalue rule (Kaiser, 1960). Factors with eigenvalues >1 were retained (Kaiser, 1960) and considered. Based on the component factors of the scree (See Figure 4.1), the analysis provided ten principal components. Often using the Eigenvalue rule yields an unreasonably high number of factors, and the researcher often wants to find a smaller number of interpretable factors that explain the maximum amount of variability in the data (Preacher, Zhang, Kim, & Mills, 2013). As suggested by Cattell (1966), the analyst should retain the number of factors that are worthwhile to maintain. The analysis demonstrated consistency

between the scree plot and eigenvalues. Because several of the components had eigenvalues just above 1, there is little justification to retain it. In considering the eigenvalues and scree plot, the researcher decided to force the model to five factors.

Table 4.3

Components with Initial Eigenvalues

Components	Initial Eigenvalues
1	6.014
2	3.572
3	2.024
4	1.685
5	1.448
6	1.207
7	1.164
8	1.051

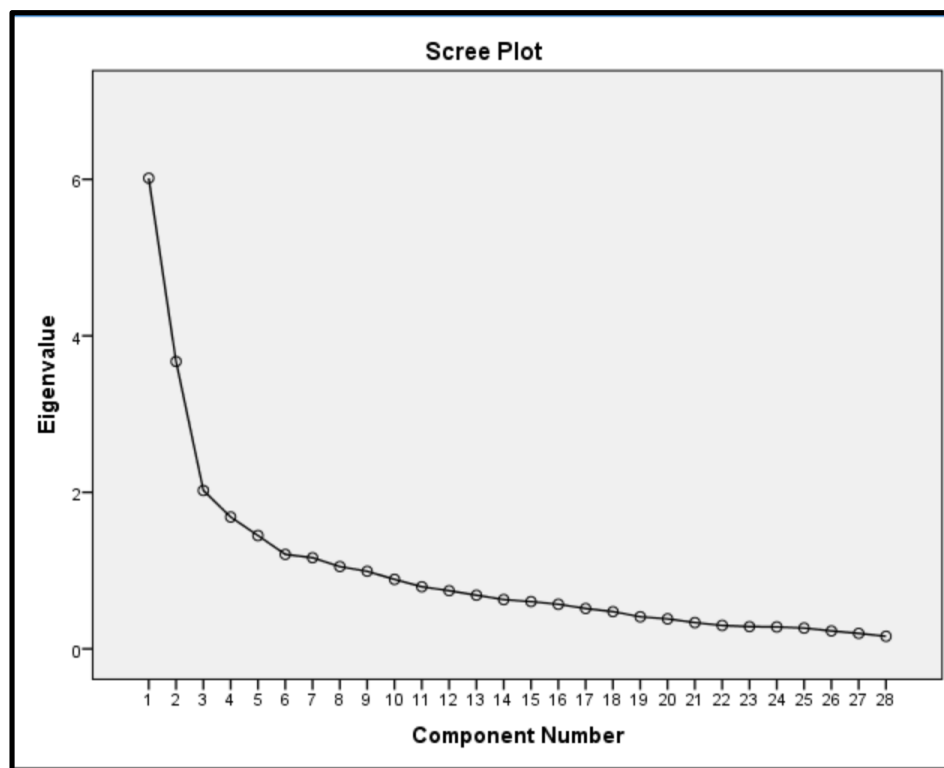


Figure 4.1. Cattell Scree-plot data for Inclusive Talent Identification and Development Questionnaire (ITID-Q)

Based on the items that loaded onto each component, the researcher identified the five factors as:

- historical perspectives identification criteria (HPIC)
- teachers' lens (TL)
- culturally responsive student-centered approaches (CRSCA)
- students' learning preferences (SLP); and
- assessment processes (AP).

Each component is described below and included in Table 4.4. A component loading of .4 or larger was used to identify primary factors on which items were loaded (Stevens, 1992). The components appeared to explain 53.007% of the variance.

Factor 1: Historical Perspectives Identification Criteria (HPIC). The first component is composed of the items associated with common, mainstream identifiers for gifted identification. The construct is comprised of 7 items: 1, 2, 13, 20, 22, 29, 32 (see Table 4.4). The measure of internal reliability, Cronbach's alpha coefficient, was acceptable ($\alpha=.798$).

Factor 2: Teacher's Lens (TL). The second component is composed of the items associated with the teacher's perspective of the traits, attributes, and behaviors underserved students display. The construct is comprised of 6 items: 6, 14, 24, 30, 31, 33 (see Table 4.4). Alpha if item-deleted was higher here with the removal of item 34, and the measure of internal reliability, Cronbach's alpha coefficient, was acceptable ($\alpha=.733$).

Factor 3: Culturally Responsive Student-centered Approaches (CRSCA). The third component is composed of the items associated with culturally responsive student-centered approaches. The construct is comprised of 5 items: 16, 17, 18, 23, 34 (see Table 4.4). The measure of internal reliability, Cronbach's alpha coefficient, was acceptable ($\alpha=.735$).

Factor 4: Students' Learning Preferences (SLP). The fourth component is composed of the items associated with students' learning preferences. The construct is comprised of 5 items: 3, 8, 10, 14, 27 (see Table 4.4). The measure of internal reliability, Cronbach's alpha coefficient, was questionable ($\alpha=.651$).

Factor 5: Assessment Processes (AP). The fifth and final component is composed of the items associated with assessment processes. The construct is comprised of 4 items: 4, 7, 9, 12 (see Table 4.4). The measure of internal reliability, Cronbach's alpha coefficient, was poor ($\alpha=.532$).

Table 4.4

Concluding list of items in ITID-Q after final PCA; n=125.

		Component				
Item		Historical Perspectives Identification Criteria	Teacher's Lens	Culturally Responsive Student-centered Approaches	Students' Learning Preferences	Assessment Processes
20	Student performance	.782	-	-	-	-
13	Above average ability	.744	-	-	-	-
29	Teacher requires mainstream English	.709	-	-	-	-
32	Student follow classroom rules and expectations	.650	-	-	-	-
1	Achievement and Intelligence tests	.634	-	-	-	-
22	Only teacher referrals and nominations	.601	-	-	-	-
2	Student conforms to peer group norms	.548	-	-	-	-
24	Teacher observes in various settings	-	.714	-	-	-
15	Parent Involvement	-	.552	-	-	-
33	Teachers understand their culture and heritage	-	.540	-	-	-
6	Student exhibits social justice	-	.540	-	-	-
30	Students critique social and cultural themes	-	.531	-	-	-
31	Teachers accept student expression in several ways	-	.526	-	-	-
16	Student's behavior and	-	-	.712	-	-

	social interactions					
18	Special education status	-	-	.694	-	-
17	SES status is considered	-	-	.639	-	-
34	in curricular approach					
34	Teacher's critique social	-	-	.598	-	-
	and cultural concepts					
23	Teachers have	-	-	.534	-	-
	multicultural training					
10	Curriculum and	-	-	-	.692	-
	strategies reflect student					
	preferences					
8	Teachers understand	-	-	-	.623	-
	gifts and talents manifest					
	across income					
14	Teachers understand	-	-	-	.580	-
	students' cultural					
	backgrounds					
27	Culturally relevant	-	-	-	.464	-
	curriculum					
3	Self-selected interests	-	-	-	.429	-
	Creativity is included in					
4	gifted identification	-	-	-	-	.679
	process					
7	Early Identification	-	-	-	-	.607
	Nonverbal Assessments					
9	used in identification	-	-	-	-	.565
	process					
12	Student engage in	-	-	-	-	.484
	alternative processes					

Reliabilities of the Components. It is important to run PCA before evaluating the coefficient alpha if item deleted. The PCA analysis provides us with the components of the instrument, and coefficient alpha if item deleted provides information on if an item is deleted then that factor becomes more reliable- Cronbach's α increases. In order to measure the internal consistency of the five factors, the research used Cronbach's α for the entire data set (see Table 4.5). The internal consistency of three of the factors was acceptable (>0.7) (Nunnally, 1978), except factor four (students' learning preferences) and five (assessment processes) which yielded internal consistencies below 0.7 indicating weaker reliabilities.

Table 4.5

Means and reliabilities of ITID-Q factors.

Factors	Means	Cronbach's α
Historical Perspectives Identification Criteria	.372	.798
Teacher's Lens	.365	.789
Culturally Responsive Student-centered Approaches	.377	.735
Students' Learning Preferences	.281	.651
Assessment Processes	.253	.532

Discussion and conclusions

The researcher's goal in this article was to develop an instrument to measure teachers' knowledge and attitudes towards high-ability underserved youth in low-income schools. This instrument proved instrumental in understanding the views that teachers had about best inclusive practices. There are some additional revisions that need to happen to make this a more perfected scale. Because of the weaker internal reliabilities of components 4 and 5, more items need to be written to boost the reliabilities of these components. Also because of issues with variance, the Likert scale for the revised scale will be 1-7, continuing to use *importance* as the frequency.

Many of the items proved to be interesting and demonstrated the need for this instrument-to fully understand how to guide instruction and professional development for pre-service and in-service teachers, and to correct any misconceptions they have regarding underserved, high-ability youth. The researcher evaluated the response distribution for each Likert-item, and focused on patterns that caused concern and were of interest. The most interesting item, 28, had to be deleted from the factor exploration because it did not correlate with any other item. Item has been rewritten for the revised scale because the researcher believes it is of great importance to understand and explore in this article.

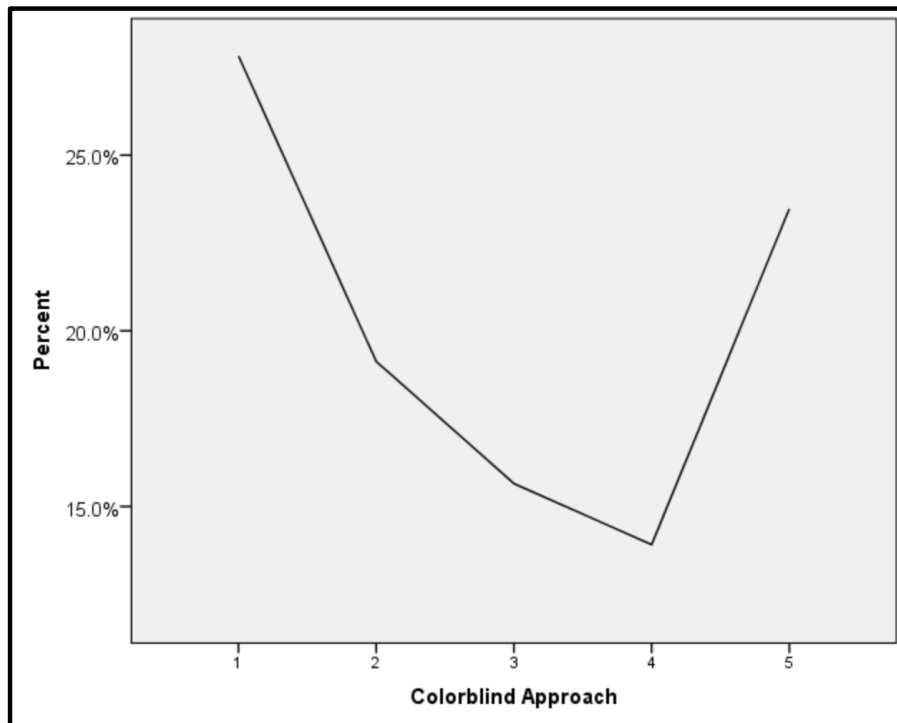


Figure 4.2. Item 28, Colorblind Approach. Teachers answered how important is it to operate in a colorblind approach.

This item was reverse scored (5=1, 4=2). The reverse presentation practice facilitates the detection of unengaged participants. The reverse scoring affects the alpha, and are important for reducing response bias (Field, 2005). Essentially 54% of the participants responded as very important (32%) and important (22%) indicating their beliefs that it is important to operate in a colorblind approach, which is not a best practice when working with students from culturally, linguistically, and economically diverse groups. Cochran-Smith (2004) advises teachers not to mistake colorblindness for educational equity. These practices decontextualize teaching and learning and often result in bolstering the very stereotypes they are intended to dispel (Cazden & Mehan, 1989). Critical multicultural educators refer to colorblind ideology as a sustainer and justifier for the culture of power (Delpit, 1988), and constitutes a new racism in the era of

political correctness (Bonilla-Silva, 1997). Ladson-Billings (1994) provides a description of her own encounters with colorblindness as an instructor:

My own experiences with White teachers, both pre-service and veteran, indicate that many are uncomfortable acknowledging any differences and particularly racial differences. Thus some teachers can make statements as “I don’t see really see color. I see children.” Or “I don’t care if they are red, green or polka dot. I just treat them all like children” (p. 31).

This issue has been addressed thoroughly in teacher education or gifted education literature. Ford, Moore, & James (2005) discuss the cultural mismatch between teachers and culturally diverse students in relation to colorblindness. Ford et al., (2002) assert that teachers must assume that cultural differences are always present in their classroom, and work towards being understanding and culturally responsive. However, teachers may be hesitant to do this because in doing so exposes issues of oppression, institutional racism, and power makes “color” visible, and in turn forces White students to face their White identity and White privilege (Cochran-Smith, 1995; Lawrence & Tatum, 1997; McIntyre, 1997; Tatum, 1994). As an effect, teachers tend to use White students as the norm in how they understand the manifestations of gifts and talents by which to compare, understand, evaluate and make decisions about Black and other racially and culturally different students (Trotman & Ford, 2011). Considering that the majority of educators taking this questionnaire reported that they received training in gifted and multicultural education, it begs us to question the effectiveness of the workshops/PD/courses, as well as the paradigms, and practices they are using from this training.

Another interesting and polarizing item based on the research and literature regarding underrepresentation was Item 29: *How important is it that teachers require students to use Mainstream English?*

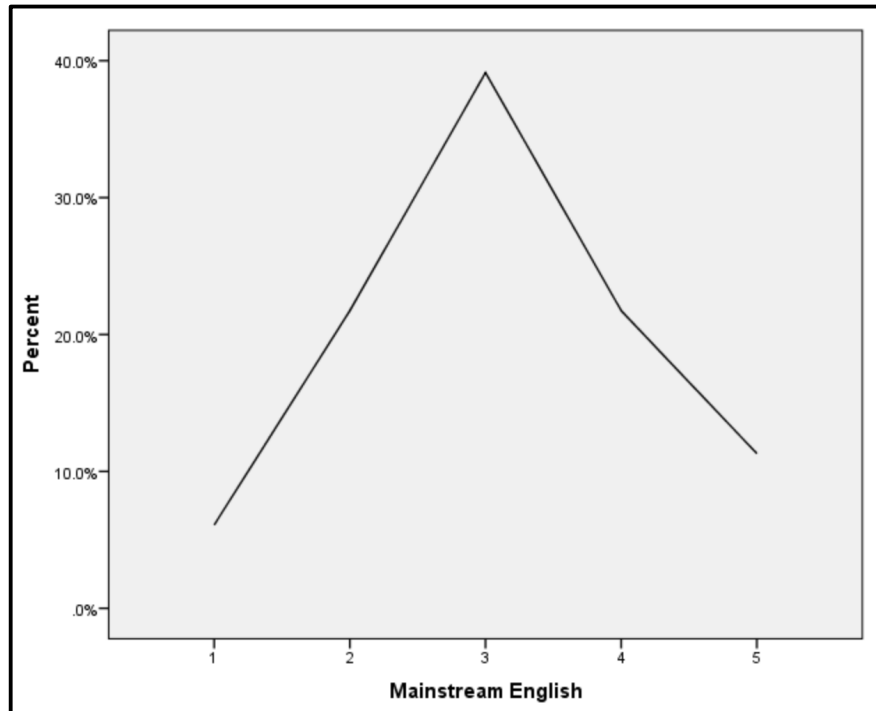


Figure 4.3. Item 29- Mainstream English. Teachers answered how important it is for them to require students to use Mainstream English.

According to Ford (2011), “Culturally competent educators seek to understand the worldviews (i.e., values and norms) of racially and culturally different students without negative judgements (p. 41).” Frasier (1995) postulated that language is one of the greatest issues in the assessment of children from diverse backgrounds for gifted programs. If teachers believe it is important to require mainstream English in their classroom, we fail to recognize the importance of expressive communication- which is incredibly valuable to varying ethnic groups.

Boykin (1994) found that African American exhibit varying modalities of cultural styles, one being oral tradition. This is demonstrated by use of elaborate and exaggerated language,

creation and use of slang terms, and direct metaphorically colorful use of language. Frasier et al. (1995) included communication skills as one of the 10 general characteristics that are derived from the literature on giftedness as core attributes with the giftedness constructs. Code-switching or the mixing of two languages when speaking, is often viewed negatively when it may be an effective way of communicating a specific idea, and can also be useful when assessment processes includes writing samples (Frasier et al., 1995, p. 33). Requiring culturally, linguistically, and economically diverse students to speak only mainstream English, will eliminate the richness in expressive language, which demonstrates interpersonal intelligence and creativity (Ford, 2011, 2013; Torrance, 1974). Ford (2011) asserts communication skills outside of the mainstream language represents: fluency and flexibility in nonverbal media; keen sense of humor; richness in imagery in informal language; enjoyment of and skill in social learning and problem-solving situations; and quickness of “warm up” (p. 14). Language is symbolic of meaning, and when you censor or restrict a student’s language, and require the use of mainstream English, we disrupt ways in which they identify and construct meaning with their experiences and ideas. Not only does it restrict the how students construct meaning, but in doing so, teachers are dismissive of their talents and gifts because they ascribe to ideals that align with White normality- the scale that we tend to measure students of color and other marginalized groups.

The researcher chose to highlight these two items for the simple fact that teachers need to understand how their deficit perspectives, knowledge, and attitudes toward culturally, linguistically, and economically diverse students create a psychologically unsafe environment and contribute to issues of underrepresentation in gifted education. There were several other items that raised the antenna of the researcher: Item 18 and Item 32. Teachers reported that these factors are not as important in identifying students for gifted education; however, research has

provided evidence of the exact opposite (Trotman & Ford, 2011; Ford 2013). Teachers are influenced by the students' behavior and ability to follow classroom rules (Item 32). In my own experiences as a classroom teacher and trainer, I have frequently heard from teachers "that child doesn't behave," "she/he is too argumentative and aggressive" or "that child has too many behavioral referrals to be gifted" when discussing gifted referrals. Teachers are also influenced by a student's special education status when referring them for gifted services (Bianco, 2005), but majority indicated that they were not on the questionnaire.

With an instrument such as ITID-Q, we have a better idea of the ideologies and knowledge that teachers have regarding high-ability students from underserved populations. In addressing these perceptions from teachers, we work to address factors contributing to underrepresentation in gifted programs. Not only do we address underrepresentation in gifted education, but we help to create culturally responsive teachers who effectively create academically rigorous curriculum, psychologically safe environments, and who critique paradigms steeped in oppression and inequity. More research is still needed with the instrument with a larger sample size, but the validation process provided a more perfected scale with revised items aimed at increasing reliability of the instrument.

Implications for Future Research

Being that the pilot focused on in-service teachers, the next study with *ITID-Q* will focus on pre-service teachers, exploring their knowledge and attitudes towards inclusive practices when working with underserved students. The study will look at the attitude and knowledge differences pre-service teachers may have, and focus on those ideologies in the teacher education programming. In addition to completing the questionnaire, the pre-service teachers will be asked to participate in semi-structured interviews to discuss these ideologies. The study will also

explore the potential disconnect, if there is one, in the component, emerging knowledge on talent identification and development practices pre-service teachers have before they enter the classroom and if that competency decreases.

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CHAPTER 5

**PREPARING CULTURALLY READY PRE-SERVICE EDUCATORS TO MEET THE
NEEDS OF HIGH-ABILITY, UNDERSERVED YOUTH⁴**

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Abstract

The purpose of this article was to discuss ways to bridge culturally relevant pedagogy with gifted educational pedagogy in pre-service programs. There was a lack of literature and empirical studies focused on teacher education and underserved, high-ability youth. The author proposed using the instrument “Inclusive Talent Identification and Development (ITID-Q)” to assess the knowledge pre-service teachers have about high-ability youth in order to create an instructional plan to enhanced their awareness and further their development. The 4 Ps of cultural-readiness created by the author was adapted from Rhodes (1961) 4 Ps of creativity. This approached helped connect the field of culturally relevant pedagogy to the field of gifted educational pedagogy, increasing the attention given to high-ability youth during pre-service education.

Keywords: culturally relevant pedagogy, gifted education, underserved students, talent identification, talent development, pre-service teachers, Inclusive Talent Identification and Development-Questionnaire (ITID-Q)

Pounding the Pavement, but Minimal Progress

In preparing tomorrow's teachers, it is virtually impossible for teachers to succeed with all students they will meet without exploring how both students' and teachers' learning experiences are influenced by their home languages, cultures, and contexts. The realities of race and class privileges in the United States; the recursive manifestations of institutional racism within the educational system; and the numerous factors that shape students' opportunities to learn in classrooms profoundly effect both students and teachers (Darling-Hammond, 2011, p.ix). It is essential that these topics be explored, due to public education being the only privilege afforded to every citizen regardless of ethnicity, religion, academic abilities, or socioeconomic class in the United States. Despite the acknowledgement that these topics should be central to pedagogical practices of future educators, the manner in which these topics and related issues are explored are not always robust or comprehensive, which has been a concern of scholars for decades. These questions and concerns about the intersections of education and diversity, as well as best-practices has been a source of inquiry for decades (Grant & Gibson, 2011). Highly debated topics include (a) inexperienced and culturally unprepared educators, (b) meeting the needs of underserved students, (c) heavy reliance on standardized testing, (d) lack of culturally relevant pedagogical practices, (e) implications of poverty, and (f) addressing issues of underachievement and behavior management to name a few.

Our Nation as a whole, has struggled, and continues to struggle with meeting the needs of underserved groups; therefore, the systemic issues that underlie our societal norms and practices have direct effects in our public schools. In addition to the aforementioned concerns, in many low-income public schools and communities, administrations, specialists, and teachers struggle to recognize and meet the needs of high-ability and gifted/advanced students, particularly

students of color. Several scholars and social justice advocates have made numerous calls for action, in order to address underrepresentation of culturally and linguistically diverse students in gifted and advanced programs, as well as advocate for appropriate programmatic practices to foster the talent of our underserved youth (Baldwin, 1987; Ford, 1995; Frasier, 1991; Torrance, 1971). It has been demonstrated that educators' attitudes and belief systems play a critical role in social injustices that exist in school settings (Ford, Grantham, & Whiting, 2008). Contextual influences such as economic status, culture, and language impact learning and how we perceive our students, and effect the attitudes and value systems of educators. Some students readily demonstrate their gifts, but for others, the demonstration of their gifts and talents may not be recognized in a traditional sense or easily observed (Ford, 2013). Without proper training and an awareness of how contextual influences impact learning, teachers and counselors may potentially overlook students for identification (Ford, 2013). If educators continue to exclude contextual factors from the equation of identifying students, underrepresentation of culturally, linguistically, and ethnically diverse students will continue to persist. Our Nation and public schools are becoming increasingly diverse and increasingly poor, and we must act intentionally and expeditiously to meet the growing needs of our students.

Although there is a bevy of information on the needs of culturally and linguistically diverse gifted students, there is little being done with pre-service teachers to adequately prepare them to meet the needs of gifted students in general (Feldhusen & Kolloff, 1986; VanTassel-Baska, 2003), and specifically with underserved students. Pre-service teachers are not required to take courses or receive training in gifted education (VanTassel-Baska, 2003), and typically receive limited training in multicultural education (Cochran-Smith, 2003; Grant & Sleeter, 1986; Ladson-Billings, 2011). How do we begin to bridge the differences of the students in teacher

education programs and the students they teach? In many cases, pre-service teachers have not had the chance to explore the many applications of multicultural theory in an educational setting (Milner, 2010). In addition to pre-service teachers not having the opportunity to explore multicultural theory, an additional neglected area is talent identification/development of culturally, linguistically, and racially diverse students. This limited, and typically lack of awareness is not sufficient in preparing future teachers to adequately meet the needs of high-performing students, whose gifts and talents manifest in ways that seemingly do not fit mainstream standards. As our Nation becomes more diverse, there are adaptations that need to be made in pre-service programs with regard to our diverse, talented, and growing low-income population. In addition, it is equally important that we address the implications of poverty, and how these implications affect the manifestations of talent, as well as identification practices. Poverty is not a novel contemporary issue to tackle in our schools but a recursive one. Like the underrepresentation of culturally and linguistically diverse students in gifted education in general, we have yet to be able to meet the needs of low-income gifted students by means of identification, programming, and sustainability.

Most pre-service teacher programs have some requirement for teachers to fulfill a diversity or multicultural component (Ladson-Billings, 2011); unfortunately, most programs do not have the adequate capacity to make this requirement an integral part of the program (Cochran-Smith, 2003). It important to note, this is not true for all programs. In turn, the requirement is handled by a single course, a workshop, or a program module (Cochran-Smith, 2003). According to Cochran-Smith (2003), this single course tends to segregate the course from other aspects of the program; the content isn't connected to methods courses or field experiences, and some faculty resist teaching the multicultural component for fear of student resistance and

poor evaluations. Because of the aforementioned challenges, it is quite difficult to get teachers to investigate themselves and critique their views and “*become certain only of uncertainty*” (Cochran-Smith, 2003). Allowing for opportunities and encouraging pre-service and in-service teachers to think critically and discuss uncomfortable topics is of great importance. If we ever want to truly move towards meeting the needs of culturally and economically disadvantaged students, help teachers recognize how culture and economics affect student outlook and development is crucial. This could be why some researchers believe that it is too great of a challenge to change the minds of future educators in preparatory programs. These researchers have challenged if teacher education can really shape the beliefs and dispositions of teachers, and if coursework can instill the attitudes and perspectives that enable teachers from dominant backgrounds to successfully teach all students (Grant & Gibson, 2011; Haberman, 1991; Weiner, 1993).

Keeping the aforementioned challenges in mind, the author believes it is still important for educators to question, where did the struggle for other awareness begin for most teachers and how should it be addressed? We understand cognitive dissonance is present when pre-service teachers are working with diverse populations, but are we being strategic and intentional with how we address these knowledge gaps? Are we doing enough in teacher preparation programs to equip pre-service teachers with pedagogical tools to educate low income, high-ability students from culturally and ethnically diverse backgrounds? What do our pre-service teachers know about talent identification and talent development practices for culturally, linguistically, and economically disadvantaged students and how can we equip them with the knowledge and skills to meet the needs of this very important and often overlooked population?

This overview of how talent development and multicultural education are incorporated into teacher preparation programs, does not aim to postulate that teacher preparation programs are failing. This review aims to highlight concerning issues when thinking of talent development with low-income, culturally different students and ways in which to address them. It is important to note that preparation programs are taxed with several challenges. They have the challenge of educating all students with high standards, and are heavily assessed on these standards. They are also dealing with the disconnect of what they are learning in their programs, and what may be transpiring in the classroom with their mentor teachers. We have to understand the institutional forces in/of our public schools, and how these forces limit our future educators and program facilitators and instructors (Ravitch, 2000). Although this article highlights the gaps, the article also provides an instrument and strategies to assist programs in streamlining many of the core concepts we want our teachers to understand before they enter the classroom.

Wisdom of Practice: What Do Teachers Need to Know, Question, Believe, and Do

There are many challenges to a being low-income minority student in today's schools. For many minority children in communities and schools everywhere, particularly in low-income areas, their gifts and talents aren't being nurtured but are overlooked and underdeveloped (VanTassel-Baska & Stambaugh, 2007). Our public school system faces critical challenges as the nation becomes increasingly diverse, and teachers must be committed to educating themselves about their students, their students' culture, background, and interests. Shulman (1987a) suggested that any improvement in teaching will come from redefining teaching as more than mastery of generic skills. Shulman (1987a) asserts that 'wisdom of practice' includes not just teachers demonstrating the necessary skills of teaching, but also includes the critical thinking that underlies the pedagogical decisions that teachers make. This wisdom of practice that Shulman

(1987b) refers to also includes the context in which the teaching occurs. Contextualization includes the characteristics of the students' culture, geographic location, language, and economic status (Shulman, 1987b).

Teachers need to know the challenges they will face, many of the challenges are related to poverty. Challenges facing today's low income, urban and rural schools have both structural and cultural components. Structural challenges are those specific school policies and practices that impede student success or fail to adequately address students' needs (Noguera, 2003). Key structural issues in these districts include (a) persistently low student achievement, (b) lack of instructional coherence, (c) inexperienced teaching staff, (d) poor functioning business operations, and (e) low expectations of students (Ford, 1998; Kincheloe, 2004). Cultural challenges include policies, practices, and sets of beliefs that contribute to dysfunctional perceptions of students' intellectual abilities, specifically for culturally and linguistically diverse students (Ahram, Stenbridge, Fergus & Noguera, 2003). A number of researchers have found persistent and substantial inequities in the education received by racially and culturally different students (Darling-Hammond, 1995; Ford, 1998; Gay, 1972; Irvine, 1991; Kozol, 1992; Ladson-Billings, 1991).

Due to these structural and cultural dysfunctions that occur in many Title I schools, the primary concern amongst teachers and administrators has centered on raising the achievement of the lowest performing students and closing the achievement gap among subpopulations, at the basic level, rather than developing the talent of all youth they serve (Olszewski-Kubilius & Clarenbach, 2012), and these actions are being mirrored in our teacher preparation programs (Banks & Banks, 2003). It has been suggested that the focus on basic levels of competency and

increased attention on raising the achievement of low performing students may indirectly affect the growth of higher achieving students (Olszewski-Kubilius & Clarenbach, 2012).

The issue of teacher qualification should be added to the structural challenges that affect our nation's high-poverty schools. Those who teach in low-income schools are often teachers with weak qualifications who drift into positions because teaching is a highly competitive field (Lankford, Loeb, & Wyckoff, 2002). Not only are teachers not as qualified in high-poverty schools, teachers in these settings are 50% more likely to leave than in schools where poverty is not a pressing issue (Ingersoll, 2003). This turnover statistics contributes to inequality in student achievement. "Unequal access to experienced and highly qualified teachers is a "major factor in the stratification of educational opportunity" (Ingersoll, 2004, p. 4). Although No Child Left Behind (NCLB) required that states ensure students from low-income communities were not disproportionately taught by inexperienced and unqualified teachers, the overall outcome of this requirement did not create significant change (Almy & Theokas, 2010). According to the U.S. Department of Education (2010), students in high-poverty secondary schools, are almost twice as likely to have an out-of-field teacher when compared to low-poverty schools. In terms of teacher experience in high-poverty schools, teachers with weaker credentials are disproportionately teaching, specifically first-year teachers. First-year teachers are assigned to teach students in high-poverty schools at a higher rate than other students attending low-poverty schools (Clotfelter, Ladd, & Vigdor, 2006).

Low SES and gifted education. Much of the literature surrounding low-income gifted and talented students has explored the risk of underachievement, issues with identification (eligibility and assessment measures), funding disparities, and types of interventions that have shown effectiveness in meeting the needs of underserved students. However, too often in the

gifted education literature, the characteristics of low-income students are often overgeneralized and viewed as monolithic in nature. This oversimplified view does not take into account how income intersects with culture, geographic location, family values, and the larger society. Educational experiences, teacher expectations, and quality of instruction have a profound effect on the overall achievement of students.

According to Ford (2007), in high-poverty schools teachers frequently settle for curriculum that is foundational at best, with only the basic elements of content to be learned; holding the assumption that doing more is not feasible, and the mastery of the basics is an important accomplishment. This could be due to the many needs and pressures placed on the teachers to bring students to the basic level of achievement on high-stakes testing. Sampson (2002) found that there were several barriers affecting the development of talents among children of poverty: (a) inadequate resources, both financial and in terms of personnel; (b) lack of sustained commitment; and (c) an attitude of “one size fits all” in programming. Worrell (2007) posited that:

Students’ academic self-efficacy is affected by their teachers’ perceptions, but may also be affected by the view that society convey to students about their competence. Negative communications about competence and the ability to be successful in academic tasks are much more likely to be communicated to students from low SES backgrounds than their affluent peers. (p.48)

Therefore, a counter narrative needs to be created: students need to understand how their own backgrounds may work against them and that the curriculum may seem foreign; however, they must persist in their ability to be successful. Consequently, it is vital that our educational settings accommodate different student interests and language inflections.

In order for us to fully achieve the goal of bolstering and sustaining equity and excellence in our schools, particularly those in low-income areas, the *wisdom of practice* must include culturally relevant pedagogy (CRP). CRP is intended to raise the critical consciousness of our students, increase academic success, encourage working relationships with parents and community leaders, and maintain or sustain everyone's cultural consciousness (Banks & Banks, 2003; Brown-Jeffy & Cooper, 2011; Gay, 2000; Ladson-Billings, 1995; Moll & Gonzalez, 2004; Nieto, 1999; Sleeter, 2013). When this *wisdom of practice* is done with fidelity, motivation can increase, and students can have better experiences with academic success (Sleeter, 2013). Is it enough that teachers understand content without understanding contextual and/or environmental influences? No, teachers need to be able to understand the social context of schooling, and recognize and examine how culture is integral to learning, especially in their own learning (Darling-Hammond, 1995; Grant, 1991; Ladson-Billings, 1991).

A Bridge: Culturally Relevant Pedagogy and Multicultural Gifted Education

In support of improving teacher preparation programs to produce culturally competent educators, Gay (2002) has shown that, “explicit knowledge about cultural diversity is imperative to meeting the educational needs of ethnically diverse students” (p.107). Institutions of Higher Education have adopted standards from the National Council for Accreditation of Teacher Educators (NCATE) that are specific to multicultural education. These standards ensure that all teacher candidates encounter highly trained, well-prepared faculty with the ability to effectively model tolerance and teach learners from a multiplicity of cultural backgrounds and dispositions (NCATE, 2008). Through the NCATE standards, teacher candidates are required to demonstrate the knowledge, skills, and professional dispositions necessary to help all students learn (NCATE, 2008).

Through the agency of explicit training and field experiences, the educator should begin to examine the cultural mismatch between themselves and their students (Ford & Moore, 2004). This cultural mismatch can include the difference in values, difference in styles of communication, and varied conceptions of time (Ford & Moore, 2004). The educator may also begin to think about the differences between themselves and the students, in regards to socioeconomic status, environment, family structures, and power dynamics between themselves and the community they serve. Before educators can adequately understand the cultural mismatch between themselves and their students, they must be appropriately trained in the methods and curricular practices of culturally relevant pedagogy. With this training, educators become privy to ways to enrich the curriculum to make it relevant to the population, overcome deficit orientations of their students, affirm the cultural strengths of their students, and ensure academic success for their students. In contrast, a teacher's' inability to meet the cultural needs of their students have been associated with burnout and turnover in high-minority schools, as well as (over) referrals of these students for special education evaluation, leading to an overrepresentation of many of these groups in special education and an underrepresentation of CLDs in gifted education (Blanchett, 2006; Blanchett, Brantlinger, & Shealey, 2005; Ford & Kea, 2009).

Therefore, it is of great importance to focus on cultural self-efficacy in schools and academic programming, which has been stressed for several decades. There are several terms and ideologies associated with appropriate cultural programming and practices, but for the purposes of this literature review, the focus will be on Culturally Relevant Pedagogy (CRP). Ladson-Billings (1995b) coined the term Culturally Relevant Pedagogy (CRP) as a “theoretical model that addresses student achievement but also helps students to accept and affirm their

cultural identity while developing critical perspectives that challenge inequities that schools (and other institutions) perpetuate” (p. 469). CRP according to Ladson-Billings (1995a) is specifically defined as:

A pedagogy of oppression not unlike critical pedagogy but specifically committed to collective, not merely individual, empowerment. Culturally relevant pedagogy rests on three criteria or prepositions: (a) students must experience academic success; (b) students must develop and/or maintain cultural competence; and (c) students must develop a critical consciousness through which they challenge the current status quo of the social order. (p. 160)

This pedagogy is an approach for schools to acknowledge the home-community culture of individuals, and through this lens establish a framework that is culturally sensitive and integrates cultural experiences, values, and understandings into the teaching and learning environment (Brown-Jeffy & Cooper, 2011). Culturally relevant pedagogy is one that “teaches to and through the strengths of ethnically diverse students” (Gay, 2000, p. 29). This pedagogy also provides a way for students to maintain their cultural integrity and identity while succeeding academically (Ladson-Billings, 1995b). Not only does this pedagogy encourage students to maintain their identity, but also to recognize, understand, and critique current social inequities (Ladson-Billings, 1995b). In order for this conversation and examination to occur in a relevant manner, the educator must too be competent and aware of social inequities and their causes (Ladson-Billings, 1995b).

Culturally relevant pedagogy in multicultural gifted education. Gifted education literature has outlined goals appropriate for high-ability students, this includes cognitive goals as well as goals for the gifted programs that serve them. VanTassel-Baska and Stambaugh (2006)

outlined goals that are fundamental ideals for gifted students: (a) develop high-level proficiency in all core subject areas, (b) become independent investigators, (c) appreciate the world of ideas, (d) enhance higher level thinking skills, and (e) encourage the spirit of inquiry. When merging the goals of gifted education with multicultural educational goals, (2011, p. 80) provides goals and objectives to meet the needs of our racially and culturally different students, and are outlined in Table 2.1 and Table 2.2. These goals are comparable with original and revised tenets of CRP (Ladson-Billings, 1993). As educators, we will fail to meet the needs of high-ability students if we fail to include and consistently practice the goals outlined by Ford (2011). If we focus only on the culture of students without giving consideration to the need for differentiated curriculum that meets their academic ability, we essentially stifle their potential.

Talent development and pre-service teacher preparation. As our population becomes increasingly more ethnically, culturally, and socio-economically diverse, and our teacher education demographics remain stable, there have been several calls from educational organizations, policy makers, practitioners, and advocate groups for substantive changes in teacher education programs (Sorrells, Webb-Johnson, & Townsend, 2004). These changes include but have not been limited to: (a) increase the diversity among teacher education faculty, (b) recruit more Culturally and Linguistically Diverse (CLD) students into teacher education programs, and (c) prepare White pre-service and in-service teachers to provide culturally responsive instruction for all learners (Ford, 2011; Gay, 2002; Irvine, 2003; Milner, 2010; Sorrells et al., 2004). Despite the changes in our student population, gifted education programs and AP classes have yet to increase in diversity for at least three groups- Black, Hispanic, and American Indian students (Trotman Scott & Ford, 2011).

Table 5.1

Part I: Multicultural Gifted Education: A Synthesis of Goals and Objectives

Goals and Rationale	Gifted Education	Multicultural Education	Multicultural Gifted Education
Needs	Meet individual needs of students based on ability and interests.	Meet individual needs of students based on race and culture.	Meet individual needs of students based on ability and sociodemographic variables-income, SES, culture, ethnicity, and gender
Equity	Gifted students have a right to an education that is nondiscriminatory and a right to educational programs and services that meet their cognitive and academic needs.	Racially and culturally different students have a right to an education that is nondiscriminatory and a right to an education that meets their needs as cultural and racial beings.	Gifted students have a right to an education that is equitable and nondiscriminatory and a right to educational programs and services that meet their cognitive and academic needs, regardless of culture, ethnicity, gender, income, and SES.
Excellence	Gifted students cannot achieve to their potential when educational standards fail to challenge them. Curricular and instructional modifications are essential for meeting the needs of highly able students.	Racially and culturally different students cannot achieve to their potential when expectations are low or fail to consider their culture and race. Curricular and instructional modifications are essential for meeting the needs of racially and culturally different students.	Gifted students cannot achieve to their potential when educational standards and expectations are low and negative based on culture, ethnicity, gender, income, and SES. Curricular and instructional modifications are essential for meeting the needs of highly able students of all racial cultural backgrounds, and all income and SES levels.
Grouping	Ability grouping facilitates the academic and cognitive development of gifted students; gifted students perform better when taught with true peers (cognitive and social).	Cooperative and peer grouping provide social support and build relationships; racially and culturally different students perform better academically and affectively when the learning environment is supportive, nurturing, and affirming.	Grouping promotes academic and social development; all students perform best academically and social-emotionally when the learning environment is supportive, nurturing, and affirming.

Table 5.2

Part II: Multicultural Gifted Education: A Synthesis of Goals and Objectives

Goals and Rationale	Gifted Education	Multicultural Education	Multicultural Gifted Education
Under-achievement	Underachievement must be prevented or reversed so that gifted students reach their potential in school and life.	Underachievement must be prevented and/or reversed so that racially and culturally different students reach their potential in school and life.	Underachievement must be prevented or reversed so that gifted students reach their potential in school and life, regardless of culture, race, gender, income, and SES.
Affective and Supportive Services	Supportive services must be present in schools to help gifted students to adjust psychologically and socially and increase their self-understanding and appreciation of abilities.	Supportive services must be present in schools to help racially and culturally different students to adjust psychologically and socially and increase their self-understanding and appreciation of culture and ethnicity.	Supportive services must be present in schools to help all students to adjust psychologically and socially, regardless of sociodemographic variables; students must have self-understanding and appreciate and respect their race, culture, and gender
Teacher Training	Teachers must be trained to work effectively with gifted students and provide relevant and rigorous education.	Teachers must be trained to work effectively with racially and culturally different students and provide a culturally relevant and appropriate education.	Teachers must be trained to work effectively with all gifted students and provide a rigorous and culturally relevant education.
Lifelong goals	Gifted education helps children to become responsible adults who make significant contributions to society.	Education helps racially and culturally different children to become responsible adults who make significant contributions to society.	Education helps gifted children from all backgrounds to become responsible adults who make meaningful contributions to society and citizens who are culturally competent, as well as socially active, responsive, and responsible.

Several scholars and advocates in the field have also petitioned for more coursework or training in gifted education in regards to understanding the talent manifestations, identification, and development of [Culturally and linguistically Diverse] CLDs students (Baldwin, 2007; Ford, 2011; Moon & Rosseli, 2000; VanTassel-Baska, 2003).

The operational definition of talent development has evolved and is typically open to several interpretations. For this article, Gagné's (2004) Differentiated Model of Giftedness and Talent (DMGT), is the framework used to describe talent development of gifts and abilities. DMGT is a holistic, theoretical talent development framework that emphasizes the importance of context, natural aptitudes, and developed abilities. According to Gagné (2004), giftedness designates the possession and use of untrained and spontaneously expressed natural abilities (called outstanding aptitudes or gifts), in at least one ability domain, to a degree that places an individual at least among the top 10 percent of same-aged peers. Gagné (2004) also expressed that talent designates the outstanding mastery of systematically developed abilities (or skills) and knowledge in at least one field of human activity to a degree that places an individual at least among the top 10% of age peers who are or have been active in that field or fields. According to his definitions of gifts and talents, Gagné (2004) proposed that giftedness is the potential or aptitude within an individual that can be developed into talent by environmental and other factors. In this model, the informal/formal learning processes and practicing that occur can be combined with environmental catalysts to transform natural skills into developed talent (Gagné, 2004).

With interventions and minimal levels of performance at the forefront of many school improvement plans, where does talent development fit into the paradigm/structure of high-poverty schools? Many teachers are unfamiliar with the myriad of ways in which gifts and

talents manifest in students, particularly students of color and children living in poverty.

VanTassel-Baska et al. (2008) notes, “In the United States, training in gifted education is more optional at the secondary level, especially as it is carried out through professional development services that a local district provides, state gifted education endorsement, and/or graduate courses in gifted education (p. 347). Likewise, as scholars and practitioners, we cannot assume that gifted education programs and professional development seminars prepare in-service and pre-service educators to work with racially and culturally different students (Ford, 2011). Due to the unfamiliarity of educators with gifted education and talent development, one can infer that many of our students are not being fully provided with the talent development and services they need in order to achieve commensurate with their potential. Feldhusen (1997) observed almost two decades ago:

Some teachers undoubtedly can acquire those skills and understanding through their own practice experiences working with talented youth in the classroom. However, the daily demands of serving youth with a wide variety of ability and achievement levels and a diversity of interests, learning styles, and motivations, as well as the American tendency to focus on low-achieving or “problem” students, make it less likely that teachers will take time to study the special needs and characteristics of highly talented youth and determine how best to facilitate their learning. (p. 547).

This is still a pervasive issue in education, particularly in high-poverty schools, and due to budget cuts and a hyperfocus on standardized testing, these issues have been further exacerbated (Diamond & Spillane, 2004).

Numerous articles in gifted education have focused on the lack of teacher preparation for those serving racially and culturally different high-ability students; and due to this lack of

training, many students of color and students living in poverty are overlooked and underserved. Underrepresentation of Black, Latino, and American Indian students in gifted and talented programs and Advanced Placement (AP) continues to be recurring and pervasive problem in schools (Ford, 1998; Ford & Grantham, 2003; Olszewski-Kubilius & Clarenbach, 2012). There have been several identified factors that contribute to the underrepresentation of Black, Latino, and American Indian students. These factors include screening and identification issues (e.g., definitions and instrumentation), educational issues (e.g., quality of students' education), and personnel issues (e.g., lack of teacher training in gifted and urban education, low teacher referral) (Ford, 1998). According to Ford (2011) and National Association for Gifted Children (2012) standards, educators must be: (a) self-aware and have self-understanding, (b) cultural understanding and awareness, (c) socially responsible and responsive, (d) use culturally sensitive techniques and strategies (pp. 41-42).

Gifted education training has historically been offered at the graduate level, and few elementary teachers choose gifted education as a focus when pursuing a master's degree (Bangel et al., 2010). Consequently, most elementary teachers receive their training in gifted education through in-service professional development, and these sessions have been found to result in minimal change in participants' classroom strategies (Reis & Westberg, 1994). Bangel, Moon, and Capobianco (2010) asserted that it is appropriate and much needed to provide instruction in gifted education for elementary teachers at the pre-service level. Moon and Rosselli (2000) also posited that this shortage of training in gifted education could be remedied if pre-service teacher education programs provided coursework in gifted education.

There are limited studies conducted with pre-service teachers working with special populations. Trent and Dixon (2004) worked with pre-service teachers enrolled in a special

education course, with an added multicultural component, to better understand the impact of multicultural education on the thinking and actions of teachers. Moon, Callahan, and Tomlinson (1999) found that as pre-service teachers received more experiences working with academically diverse students, they understood the need to vary instruction to meet the needs of diverse learners. This understanding complicated issues of planning in order to differentiate for the needs of students and that it is a process, therefore teachers becoming more hesitant with incorporating differentiation into their classroom (Moon et al., 1999). Bangel et al., (2010) conducted a study with pre-service teachers designing their practicum experiences with gifted students using a 9-week online training model to accompany the field experiences.

Participants perceived an increase in their understanding of the needs and characteristics of gifted students through participation in the interventions as well as increased confidence in their general teaching abilities (Bangel et al., 2010). Berman, Schultz, and Weber (2012) found that including one course focusing on the needs and characteristics of gifted learners in a general education program still lacked in providing awareness about the nature and needs of gifted learners. Many pre-service teachers enrolled in the course generalized that gifted children in their classrooms are viewed as peer-tutors candidates who have advanced beyond the current material (Berman et al., 2012, p. 24). Berman et al., (2012) concluded that teacher education programs must include coursework and experiences focused on the development of gifted learners to overcome common misconceptions, so that these students' needs will be met in the general education classroom. These needs include engaging in rigorous, authentic experiences that meet and/or exceed the ability levels of the students, intentionally differentiating for students who are academically advanced.

Even with these calls for additional teacher training in gifted education, there are several more layers of need when you add characterizations such as economically disadvantaged, racially different, linguistically different, and culturally different students. Teachers have not been prepared to adequately address, understand, or work with this diversity in general, and particularly when a talent identification layer has been included (Ford, 1998; Ford & Grantham, 2003; Gay, 2002; Harry, 2002; Ladson-Billings, 1995, 2014; Sleeter & Grant, 1994). The question then becomes, how do researchers and scholars, as well as those charting teacher preparation programs identify what pre-service teachers know about inclusive talent identification and development practices for underserved students? What attitudes do they have about underserved students, and how do these attitudes affect their practice? The goal for the following research study is to collect data using a newly constructed instrument on what do our pre-service teachers know and how do identify areas of improvement to align our instruction to meet their needs, and therefore improve the instructional delivery and programming for our low-income underserved youth in our public schools.

Knowledge gaps. With the gaping holes in the literature regarding pre-service teachers' knowledge and attitudes associated with low-income, underserved students, there is a great need for more empirical research and literature to understand this population. Studies of diversity within teacher education programs have been consistently marginalized and underfunded (Hollins & Guzman, 2005). Albeit unintentionally, currently the nuances associated with pre-service teacher preparation tends to exclude high-ability learners. We are doing future teachers a huge disservice by not equipping them with the necessary skillset to recognize and develop the talent of our Nation's future. Our gifted programs will rely on these future teachers to refer students for gifted programming (McBee, 2006), and if they are not well-equipped, issues of

underrepresentation will continue to persist, and miss well-deserving students from underrepresented populations.

Researchers and scholars have identified and documented the various needs and characteristics of gifted students, and have posited that educators can meet these needs if provided with proper training (Ford, 2011; Grantham et al., 2011; Hansen & Feldhusen, 1994; VanTassell-Baska, 2001, 2004). Pre-service teachers are not being prepared to meet the needs of students in an inclusion classroom. Because of decreased or lack of funding, most gifted students are receiving their academic instruction from general classroom teachers, who have not been properly trained (Bangel, Moon, & Capobianco, 2010). In a recent exploration of pre-service teacher knowledge of high-ability students, most pre-service teachers indicated they had not received training on gifted education (Anderson, 2017).

Exploring knowledge gaps and deficit-oriented attitudes. In order to address the how pre-service teachers perceive high-ability, underserved students, we must first understand what they know. The Inclusive Talent Identification and Development Questionnaire (ITID-Q) is an instrument that was developed to provide information on how well can pre-service teacher identify “best practices” that are inclusive and appropriate for culturally, linguistically, and economically diverse high-ability, students.

This instrument can be used as a pre-assessment to use for training, course development, and content alignment in pre-service preparation programs. The instrument hones in on evidenced-based strategies and practices that have fared well with low-income underserved youth, and also includes deficit-oriented practices and ideologies that many educators ascribe to this population to fully glean the knowledge and attitudes of educators. ITID-Q examines teachers’ beliefs and knowledge regarding school policies, home-school connection, and

classroom practices that leads to progressive transformation of natural abilities (gifts) into knowledge and skills (talent) or fails to extend the natural gifts and talents of the student and inevitably hinders the process. The item pool for the instrument was based extensively on the multicultural gifted education literature related to issues of talent development and talent identification, and how they relate to the underrepresentation of racially, economically, culturally different students. The format and design of the questionnaire includes a scenario, and teachers are tasked with identifying “best-practices” to redesign the gifted program at majority low-income school. Likert-scaled items were used with a range of 1-5 for every instrument item, the level of importance frequency scale was used, 1 = not of importance, 5 = of great importance.

Using this instrument as a guide, education preparation programs need a framework to fully develop, prepare, and facilitate instruction for future teachers to understand the needs, characteristics, culturally responsive approaches, and strategies needed to meet the needs of high-ability, underserved students. After receiving the information from ITID-Q, you might ask, how does one go about addressing the knowledge gaps or misconceptions about high-ability students? The author has outlined a framework to address characteristics, the environment, strategies, and products that will benefit high-ability students, as well as the other students in the classroom. Although this article is centered on high-ability students, the framework is inclusive to all students, and sets a precedence for excellence. Grantham, Hines, Anderson, Catalana, & Luckey (2015) found in their work on talent development with underserved students, that all students benefitted from using an engaging, culturally responsive curriculum that challenged students to use critical and creative thinking strategies to approach content.

The 4 Ps of Being a Culturally-Ready Gifted Educator

Rhodes (1961) differentiated four strands or dominant factors that influence the occurrence of creativity: person, press, process, and product. Rhodes (1961, p. 307) defined *person* as information regarding the individual's habits, attitudes, personality, intellect, temperament, physique, traits, self-concept, value systems, defense mechanisms, and behavior. He defines *press* as the relationship between human beings and their environment; that includes understanding the climate of the environment, and the reaction of the person to the said climate (p. 308). Rhodes (1961) defined *process* as the motivation, perception, learning, thinking, and communication (p. 308). Lastly, Rhodes (1961, p. 309) defined *products* as the idea that becomes embodied into tangible form, using the creativity process. In defining these factors, Rhodes (1961) provided a way to identify the creative person, teach the creative process, learn how to assess the environment for optimal creativity and performance, and ultimately provide a space for new ideas to emerge and products to develop.

The author has adapted the 4 Ps from Rhodes (1961) to classify the factors that can impact the cultural readiness of teachers to meet the needs of high-ability, underserved youth. This framework encompasses not only multicultural strategies, but gifted strategies as well, addressing the goals outlined in Ford's (2011) multicultural gifted education rationale. This framework hopes to serve as a teacher preparation/professional development scope and sequence to address educating pre-service teachers who will work with high-ability, underserved youth, as well as giving them tools to identify and develop the talent of these students. This framework is not only to help the pre-service understand the students, but to also help them understand themselves as well. The 4 Ps of Cultural Readiness is outlined in Table 5.1 and Figure 5.1. The author asserts that before a pre-service teacher can fully address the academic needs of the

culturally, linguistically, and economically diverse students, they must first understand the culture and heritage of the student- the *Person*. The educator takes the time to build rapport with the students, as well as understand the cultural heritage, background(s), and learning preferences of the student. This not only includes the cultural background of the student, but also considers the language(s) spoken and socio-economic status of the student. In understanding the person, educators should create an environmental *Press* that is psychologically safe, and employs culturally responsive strategies and techniques.

Table 5.3

Definitions of the 4 Ps of Being a Culturally Ready Gifted Educator

	Definition
Person	Educators understand the needs and characteristics of culturally, linguistically, and economically diverse students. This includes cultural styles, learning preferences
Press	Educators create an environment that is psychologically safe, and employs culturally responsive strategies and techniques. Educators also create an environment where clear and high expectations are established.
Process	Educators understand the types of curricular approaches, strategies, and materials that should be used to engage and challenge students
Product(s)	Educators provide students with the opportunity to display their emerging ideas and strengths. These products should be evidenced-based, preferably hands-on, problem, and/or project-based to engage the student.

Through press, educators learn to create an environment where clear and high expectations are established, and social and affective needs of the students are also addressed. In effect, the educator learns to allow room for varying modalities of student expression, language, diverse opinions that may differ from their own, and creativity to emerge. Understanding environment

also includes having knowledge about the community context and the families of that community, and you should engage with families. That includes involving families in the academics, gifted referrals, and other extracurricular activities/programming (e.g., Community Problem Solving, Acceleration programs). The *Process* is defined as understanding the types of curricular approaches that should be used to engage and challenge students. The use of differentiated curriculum and creativity strategies with the content standards is essential to developing talent, but also providing the opportunity for students to showcase their strengths as well. With process, pre-service teacher learns about critical and higher-order thinking strategies, as well as creativity strategies, and how to use these strategies to teach course content and meet state standards. Lastly, the *Products* are the means in which students have the opportunity to display their emerging ideas and develop a portfolio of sorts. These products should be employ best-practices, preferably hands-on, problem, and/or project-based to engage the students. These products should include the self-selected interests of the students, and in alignment with their learning preferences.

From the author's perspective and comprehensive literature review, much of multicultural education literature focuses on the person and press, assisting the educator with understanding how the characteristics, culture, cultural strengths, and language of the student. And in turn, how these characteristics should the pedagogical approach to teaching the student in a culturally responsive way. Albeit neglecting the processes and products that will propel the students forward academically, in a rigorous, critical, and creative manner. Literature and research in gifted education typically focuses on the latter two, process and product, without giving full consideration to a comprehensive inclusion of the needs of culturally, linguistically, and economically diverse students.

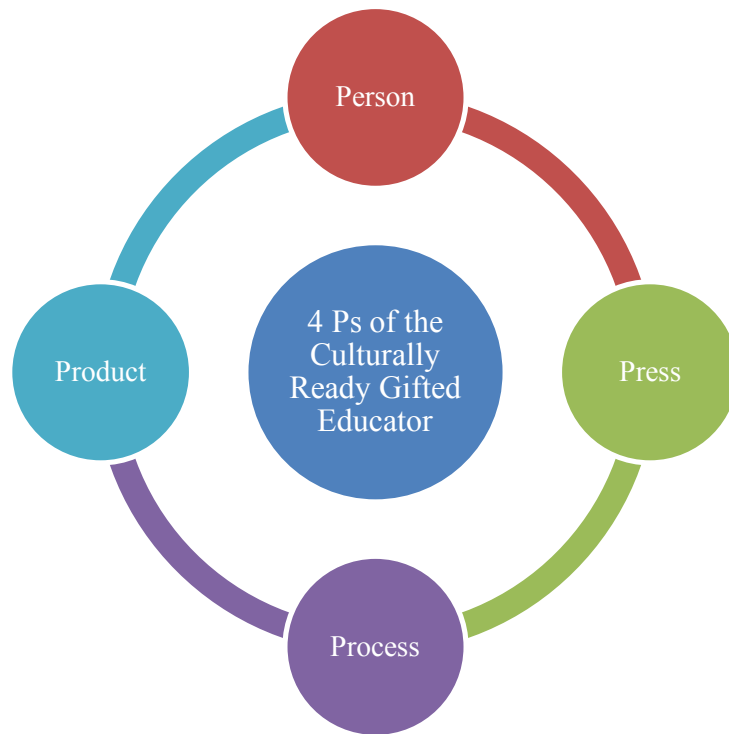


Figure 5.1. The 4 Ps of the Culturally Ready Gifted Educator. Describes the interconnectedness and holistic approach of the 4 Ps being a culturally-ready gifted educator

Gifted education tends to cater to the needs of mainstream students, middle-class White students. Gifted education takes a differentiated approach to learning- uses creative strategies, and the creative problem solving process to engage learners in a meaning way. Essentially, producing authentic and rigorous products that challenge the student on their level. The author asserts that there should be a more holistic approach in how we educate our future teachers on talent development and identification of underserved students, using this model. This is by no means a new idea, scholars that focus on diversity and equity in gifted education have been advocating for this to happen in our schools for decades (Baldwin, 1978; Ford, 1995, 1998, 2011; Frasier, 1991, 1995, 1997; Trotman & Ford, 2011). This adaptation serves as a framework to bridge the two fields, in hopes that these models need to be introduced into teacher preparation

programs, as an inclusive approach to meet the needs of high-ability students from underrepresented populations.

Scope and sequence of the 4 Ps. The author provides a scope and sequence to teach the 4 Ps to pre-service teachers. This is not a linear process, but a continuous, looping process, and there are appropriate strategies and methods that must be covered in order for the pre-service teacher to applicably build their schema on the needs of high-ability, underserved students. The author suggests beginning with *person*, understanding that building gifted knowledge will continue throughout their tenure as an educator. Understanding the characteristics of the students (culture, language, SES implications), their strengths and areas of improvement, and learning preferences, enable the educator to begin building contextual knowledge, essentially establishing foundational knowledge. *Press*, goes hand-in-hand with *person*, and material and methods can be taught in conjunction with *person*. It is important that the educator learn how to cultivate a safe physical and psychological environment that allows for students to express themselves, their strengths, areas of improvement, and interests.

However, I strongly caution facilitators not to create a monolithic picture for cultural or ethnic groups, nor should they permit the pre-service educators to take a colorblind approach. As with *person* and *press*, *process* and *product* can be jointly taught with pre-service teachers. Logically, teachers will need to learn the methods and strategies of critical and creative thinking, and in turn create assignments and activities for students to engage in. This will entail them learning how to create authentic projects and learning that are relevant to the content standards. The author also suggests that pre-service teachers have the opportunity to practice creating these lessons and activities in a practicum, field experience, and/or student teaching experience.

Remember, this is a continuous process of learning to be a culturally competent teacher of high-ability students, and should not be segregated into a week, unit, or semester.

Learning the 4 Ps is ongoing and will require that pre-service educators engage in critical reflection to discuss their challenges, victories, and cognitive dissonance with understanding their students and themselves. It will require students to battle their internal fears and resistances when discussing issues of race. Sue (2016) discuss these fears: (a) fear of appearing racist, (b) fear of realizing one's racism, (c) fear of acknowledging white privilege, and (d) fear of taking responsibility to end racism. These are substantial internal fears, and will be barriers for teachers to fully glean the 4 Ps of cultural-readiness. The author encourages that facilitators frequently use multiple modalities of critical reflection to assist pre-service teachers in unpacking their experiential realities (Sue, 2016).

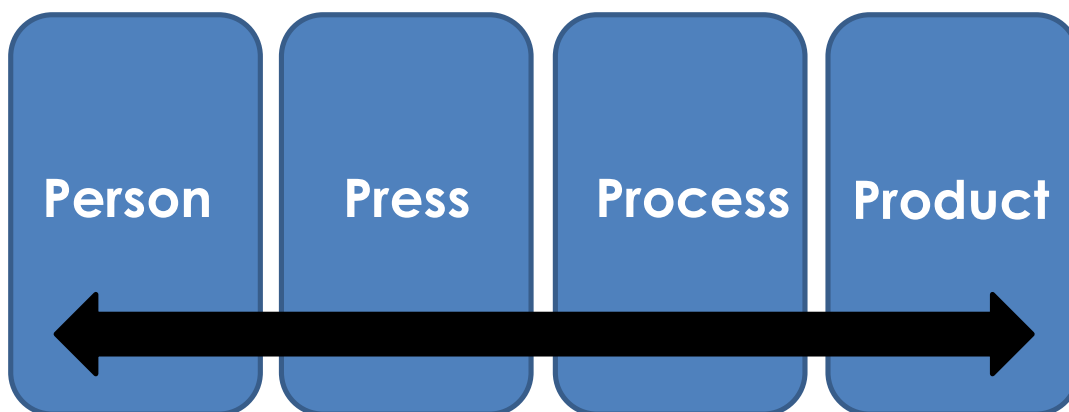


Figure 5.2. Scope and Sequence of the 4 Ps

Suggested Resources

For practitioners that may be unfamiliar with gifted education strategies, and for those who are inexperienced with culturally responsive strategies, the author has outlined suggested

resources and tools. It is important to note these resources are not all-inclusive, but provide a starting point for those interested in a scope and sequence as a facilitator.

Table 5.4

Suggested Resources to Teach the 4 Ps of Cultural Readiness

Strategies, Methods, and Materials	
Person	• Frasier's Talent Assessment Profile (Frasier, 1995) ○ Four A's ○ TABs (Traits, Aptitudes, Behaviors) • Creative Positives of Disadvantaged Students (Torrance, 1974) • Cultural Styles (Boykin, 1994) • <i>Recruiting and Retaining Culturally Different Students in Gifted Education</i> (Ford, 2013) • <i>Gifted and Advanced Black Students in Schools</i> (Grantham et al., 2011)
Press	<u>Culturally Responsive Strategies</u> ○ <i>Culturally Responsive Teaching</i> (Gay, 2000, Irvine, 1991) ○ Culturally Responsive Pedagogy (Ladson-Billings, 1995) ○ <i>Other People's Children</i> (Delpit, 1995) <u>Environments for Best Practice</u> ○ From Deficit to Dynamic Thinking (Ford & Grantham, 2003) ○ Beyond Cultureblindness (Ford, Moore, & Milner, 2005) ○ Cultivating Creative Thinking (Cramond & Connell, 2009) <u>Engaging Diverse Families</u> • <i>Bright, Talented, & Black</i> (Lawson-Davis, 2010) • <i>The Essential Conversation</i> (Lawrence-Lightfoot, 2003) • Ecologies of Parental Engagement (Barton, et al., 2004)
Process	• Ford's Blooms-Banks Model (Ford, 2011) • Differentiated Instruction (Roberts & Inman, 2007)

- Parallel Curriculum in Urban Settings (Kaplan, Guzman, Tomlinson, 2009)
- Incubation Model of Teaching (Torrance, 1990)
- Creativity Strategies
 - Creativity in the Classroom (Starko, 2013)
 - Nurturing Creativity in the Classroom (Beghetto & Kaufman, 2010)
 - Teaching for Creativity in the Common Core (Beghetto, Kaufman, & Baer, 2015)
 - Creativity and Its Educational Implications

Product(s) Methods and Materials for Teaching (Karnes & Bean, 2009)

- Instructional Planning and Evaluation
- Independent Study
- Problem-based Learning
- Project-based Learning

Portfolio Development

- Schoolwide Enrichment Model (Renzulli & Reis, 2014)
- Student Talent Portfolios (Kettle & Siegle, 2015)

Note. Adapted from Rhodes (1961).

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CHAPTER 6

CONCLUSION

In order to move our classrooms into safe psychological spaces where students of color and other marginalized groups feel valued and affirmed, as well as able to operate at a level commensurate of his/her potential, institutions of higher education must do a better job of equipping our pre-service teachers. To achieve the outcome of truly preparing our future teachers to understand their students and overcome deficit views of underserved students, the main insight is that students must have the opportunity to reach their full potential. There are many factors that prohibit underserved students from being recognized and identified for gifted education, due to misconceptions and erroneous ideologies of the “gatekeepers.” We have to create a pipeline where teachers’ first introduction to giftedness happens not when they enter the classroom, but before, in teacher preparation programs. In doing this, not only do we engage future educators in intellectual and cognitive processes of being a culturally competent teacher, but we also help them to unpack their lived experiences and heritage. As an effect, we begin to develop non-racist teachers, who we hope will eventually be anti-racist citizens who begin to dismantle the destructive forms of oppression for our underserved and marginalized. The foci of this dissertation centered on how do we know what they know, and in turn, what do we do about it?

This dissertation focused on developing and validating an instrument to assess the knowledge and attitudes of teachers toward high-ability, underserved students. This instrument, Inclusive Talent Identification and Development Questionnaire (ITID-Q), provided evidence that there is a pressing need for institutions of higher education to focus on preparing culturally-ready

educators, due to teachers having misconceptions about talent identification and development of underserved youth. There are knowledge gaps and deficit views amongst pre-service teachers, as evidence by their lack of an approach to teaching and understanding high-ability, underserved students. This instrument can serve as a training tool for pre-service teachers as well as other educators in the effort to understand gifted students from diverse backgrounds. Moreover, it can aid educators who design programs for pre-service teachers and other programs that address diversity.

Summary

Review of related literature. The literature review revealed that there are gaps in empirical studies on pre-service teachers on gifted education. The literature review also revealed that in multicultural education, rarely are high-ability, or talented students discussed. The literature review aimed to bridge the literature in culturally responsive pedagogy and teaching with gifted education. The review provided an overview of high-ability, culturally, linguistically, and economically disadvantaged students and how contextual influences and teacher perceptions influence their identification for gifted education. In thinking of factors and issues of underrepresentation in gifted education, the review addressed how the implementation of Culturally Responsive Pedagogy can be a conduit to help pre-service teachers better serve their students, as well as understand their cultural styles and strengths. The author used the works of scholars and advocates as a guidepost in developing the items and structure of ITID-Q.

ITID-Q Development. Inclusive Talent Identification and Development Questionnaire (ITID-Q) is an instrument designed for pre-service and in-service teachers to assess their knowledge about best inclusive practices to meet the needs of high-ability, underserved youth. The instrument hones in on evidenced-based strategies and practices that have fared well with

low-income underserved youth, and also includes deficit-oriented practices and ideologies that many educators ascribe to this population to fully glean the knowledge and attitudes of educators. The literature around the underrepresentation of low-income, underserved youth, indicates several factors that affect an educator's perception of these students (Ford, 2013; Ford & Grantham, 2003; Ford, Moore & Milner, 2005; Frasier, 1991; McGee, 2006; Olszewski-Kubilius & Clarenbach, 2012; Renzulli & Reis, 2012). Based on the themes that emerged in the literature as being influential towards talent development practices and identification, items were developed to assess pre-service teachers' knowledge and attitudes of (a) assessment, (b) attitudes associated with deficit thinking, (c) culturally competent teaching and practices, and (d) referral practices. These factors were based on the review of literature in gifted education and multicultural education regarding teacher training, culturally competent practices, and issues of underrepresentation of culturally, linguistically, and economically disadvantaged students.

Standards from Ford's (2011) *Multicultural Program Evaluation Guidelines and Checklist* and National Association for Gifted Children (NAGC) Gifted Standards (2012) acted as a guide to develop items regarding the environment and practices that positively affect the talent development of underserved youth, along with Frasier (1997) work on the assessment, access, attitudes, and accommodations (adaptations). Ford and Grantham's (2003) deficit-oriented attitudes and views towards culturally diverse students were used to create items that leaned towards misconceptions and myths of the needs of this population. Siwatu's (2006) *Culturally Responsive Teaching Competencies* was also used as a device to craft items from a culturally responsive perspective.

This instrument examines teachers' beliefs and knowledge regarding school policies, home-school connection, and classroom practices that leads to progressive transformation of natural

abilities (gifts) into knowledge and skills (talent) or fails to extend the natural gifts and talents of the student and inevitably hinders the process. The item pool for the instrument was based extensively on the multicultural gifted education literature related to issues of talent development and talent identification, and how they relate to the underrepresentation of racially, economically, culturally different students. The format and design of the questionnaire includes a scenario, and teachers are tasked with identifying “best-practices” to redesign the gifted program at majority low-income school.

Instrument validation- study 1. A committee of gifted education experts served as reviewers of the questionnaire items. They evaluated the relevance; technical quality; and representativeness of general, historical, classification items; talent development items; and the talent identification items that are specific to low-income, underserved youth. Following recommendations from Netemeyer, Bearden, and Sharma (2003), the experts evaluated the content of the items to see if they could come to a consensus on the theoretical structure and alignment of the items within their respective constructs. The experts also were asked to judge the importance of each statement based on the positive or negative nature of the question in reference to best practices with low-income, underserved youth. The experts rated each statement in respect to how strongly they felt it should be included in the questionnaire; they also had the option to submit recommendations or reject the item all-together. Based on the recommendations of the experts, Item 2 was deleted from the questionnaire, and suggestions on item language and grammar were corrected. There were also issues of consensus among the experts in relation to domain alignment. The statistical procedure for the instrument pilot failed to converge due to small sample size, and lack of variability on the responses. The author decided to revisit the instrument structure with pilot data in a follow-up study using Principal Component Analysis.

Instrument validation-study 2. The instrument validation process of “Inclusive Talent Identification and Development Questionnaire (ITID-Q)” using Principal Component Analysis (PCA), resulted in several changes. Based on the KMO test statistic, six items were deleted from the instrument. The Principal Component Analysis resulted in ten factors, but the researcher pared down the factors to five. The factors were as follows: (a) Historical Perspectives Identification Criteria (HPIC); (b) Teacher’s Lens (TL); (c) Culturally Responsive Student-centered Approaches (CRSCA); (d) Students’ Learning Preferences (SLP); and (e) Assessment Processes (AP). The first factor HPIC is composed of the items associated with common, mainstream identifiers for gifted identification. The second factor TL is composed of the items associated with the teacher’s perspective of the traits, attributes, and behaviors underserved students display. The third factor CRSCA is composed of the items associated with culturally responsive student-centered approaches. The fourth factor SLP is composed of the items associated with students’ learning preferences. The fifth and final factor AP is composed of the items associated with assessment processes. The internal consistency of three of the factors was acceptable > 0.7 , except factor four (students’ learning preferences) and five (assessment processes) which yielded internal consistencies below 0.7 indicating weaker reliabilities.

This instrument proved instrumental in understanding the views that teachers had about best inclusive practices. There are some additional revisions that need to happen to make this a more perfected scale. Because of the weaker internal reliabilities of Factor SLP and AP, more items need to be written to boost the reliabilities of these factors. Also because of issues with variance, the Likert scale for the revised scale will be 1-7, continuing to use *importance* as the frequency. The researcher found issues related to colorblindness and mainstream English as items that needed to further be explored. Based on the changes made for internal consistency,

and rewriting items related to colorblindness, the instrument was revised and data is currently being collected with pre-service teachers in teacher preparation program.

Implications for Education: Preparing Culturally-Ready Gifted Educators

Based on the responses of pre-service teachers on the pilot instrument, they have knowledge gaps related to colorblind ideologies, and appropriate strategies needed to meet the needs of underserved students. Also, a very small percentage reported that they had received gifted training. The author hopes that the ITID-Q will assist pre-service teachers in understanding their knowledge and attitudes towards underrepresented students, and in turn will receive instruction to correct any misconceptions.

The author adapted Rhodes (1961) 4 Ps framework, which provided a way to identify the creative person, teach the creative process, learn how to assess the environment for optimal creativity and performance, and ultimately provide a space for new ideas to emerge and products to develop. The use of 4 Ps framework aided the classification of factors that can impact the cultural readiness of teachers to meet the needs of high-ability, underserved youth. This framework encompasses not only multicultural strategies, but gifted strategies as well, addressing the goals outlined in Ford's (2011) multicultural gifted education rationale. This framework may allow professional development to expand their scope and address the sequence needed to educate pre-service teachers who will work with high-ability, underserved youth. Moreover, it will give teachers the tools to identify and develop the talent of these students. The definitions are outlined in Table 6.1.

Table 6.1

<i>Definitions of the 4 Ps of Being a Culturally Ready Gifted Educator</i>	
	Definition
Person	Educators understand the needs and characteristics of culturally, linguistically, and economically diverse students. This includes cultural styles, learning preferences
Press	Educators create an environment that is psychologically safe, and employs culturally responsive strategies and techniques. Educators also create an environment where clear and high expectations are established.
Process	Educators understand the types of curricular approaches, strategies, and materials that should be used to engage and challenge students
Product(s)	Educators provide students with the opportunity to display their emerging ideas and strengths. These products should be evidenced-based, preferably hands-on, problem, and/or project-based to engage the student.

The author suggests a sequence to teaching culturally responsive pedagogy and gifted education approaches and strategies. Learning the 4 Ps is ongoing and will require that pre-service educators engage in critical reflection to discuss their challenges, victories, and cognitive dissonance with understanding their students and themselves. It will require students to battle their internal fears and resistances when discussing issues of race. Sue (2016) discuss these fears: (a) fear of appearing racist, (b) fear of realizing one's racism, (c) fear of acknowledging white privilege, and (d) fear of taking responsibility to end racism.

These are substantial internal fears that are barriers to equity in education. The 4 Ps of cultural-readiness become a valuable tool to aid teachers in the development an equitable awareness. Several resources were also suggested (in Table 5.3) for instructors to use in teaching

these practices.

Future Directions and Final Thoughts

The author currently has the third study with pre-service teachers underway, with the finalized instrument. Following the collection of the data, the author plans to analyze the data using regression to assess the differences between groups among the pre-service teachers. The author plans to look at the pre-service teacher's gifted identification status, SES status, and ethnicity assess the effect of these differences on how they view underserved students. The author is interested to see the data from the colorblind items, and plans to contribute the finding to the complement the literature in the field.

The instrument development aspect of this dissertation proved to be valuable for understanding the knowledge and attitudes of educators toward high-ability, underserved students. One purpose of this dissertation was to validate a robust instrument that can provide guidance to facilitators on ways to develop pre-service teachers, not only in culturally responsive practices but also in practices that can challenge and recognize a young student's ability level. Gifted students from underrepresented groups should no longer go unrecognized. Ultimately, this study attempted to provide a way to enhance the recognition of gifted education within the larger social project of multicultural education.

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APPENDICIES

APPENDIX A: ITID-Q Revisions

ITID-Q by Construct: Version 1

Questionnaire Item	Hypothesized Construct
Q1: How important is it that achievement/intelligence tests be used as the primary source in the gifted identification process for students?	Historical
Q2: How important is it that the curriculum maintain a “scripted” approach?	Talent Development
Q3: How important is it that a student conforms to peer group expectations/norms?	Talent Identification
Q4: How important is it that a teacher make time available for students to pursue self-selected interests?	Talent Development
Q5: How important is it that creativity be included in the gifted identification process for students?	Historical
Q6: How important is it that a student exhibit curiosity and ask questions?	Historical
Q7: How important is it that a student exhibits a strong sense of social justice and question authority around equity?	Talent Identification
Q8: How important is to identify students early for gifted services?	Historical
Q9: How important is it for teachers to understand how gifted behaviors manifest across various income groups?	Talent Identification
Q10: How important is it for teachers to understand how gifted behaviors manifest across various income groups?	Talent Identification
Q11: How important is it that the curriculum and strategies used reflects students’ learning preferences?	Talent Development
Q12: How important is it to include checklists in the gifted identification process for students?	Historical
Q13: How important is it that students engage in alternative processes and critical thinking?	Talent Development
Q14: How important is it that student demonstrates above-average ability in the gifted identification process?	Historical

Q15: How important is it to understand the cultural backgrounds of a student in the gifted identification process?	Talent Identification
Q16: How important is it to involve the parents in the gifted identification process for students?	Talent Identification
Q17: How important is a student's behavior and social interactions in the gifted identification process?	Talent Identification
Q18: How important is socio-economic status in the gifted identification process of the students?	Talent Identification
Q19: How important is a student's special education status in the gifted identification process?	Talent Identification
Q20: How important is a student's motivation in starting new tasks and learning new concepts in the gifted identification process?	Talent Development
Q21: How important is it that a student perform well on regular classroom curriculum (grades, standardized tests, etc.)?	Historical
Q22: How important is multiple criteria (IQ/achievement, creativity, leadership, motivation) in the gifted identification process?	Talent Identification
Q23: How important is it to ONLY include teacher nominations, referrals, and checklists to identify students for gifted services?	Talent Identification
Q24: How important is it that teachers have training in multicultural education?	Talent Development
Q25: How important is it that a teacher observes students in various settings to note manifestations of advanced abilities?	Talent Identification
Q26: How important is it that a teacher to allow for creativity to be demonstrated in a positive or negative manner?	Talent Development
Q27: How important is it that teachers have training in gifted education?	Talent Development
Q28: How important is it to that the curriculum is relevant to the culture and heritage of the school's population?	Talent Development
Q29: How important is it create colorblind interactions when working with students?	Talent Development
Q30: How important is it that teachers require the use of standard English language?	Talent Development
Q31: How important is it for students to critique social and cultural concepts and themes?	Talent Development
Q32: How important is it to accept several ways for students to express themselves orally and in the written form?	Talent Development
Q33: How important is it that a student follows classroom rules and expectations in the gifted identification process?	Talent Identification
Q34: How important is it that teachers understand their own culture and heritage?	Historical

ITID-Q Scenario

You have just been assigned to teach at Booker T. Washington Elementary, located in an urban metropolitan area. The elementary school campus is a Title I campus, a school with high numbers or high percentages of children from low-income families. The campus is comprised of approximately 400 students, with 77% of the students African American, 16% Hispanic, and 5% Caucasian, compared to the district which is 53% African American, 22% Hispanic, and 19% Caucasian. Of the 400 students, 98% of students qualify for free/reduced lunch, and approximately one percent (4 students) of the population is identified as gifted/advanced. This is your principal's first year on the campus, and there are several new teachers as well. Your principal is pushing for higher test scores on statewide assessments, but the district has an initiative to increase the gifted student enrollment. You along with other teachers have been assigned to the Greater Minds vertical team that is charged with recreating the gifted program at your school. You all are creating a rubric, establishing norms, and hoping to identify more students for the program. Using your knowledge of gifted students and details of this scenario, rate the level of importance of each of the items, in order to redesign the gifted program at Booker T. Washington Elementary.

ITID-Q Pilot: Version 2

Instrument Item
Q1: How important is it that achievement/intelligence tests be used as the primary source in the gifted identification process for students?
Q2: How important is it that a student conforms to peer group expectations/norms?
Q3: How important is it that a teacher make time available for students to pursue self-selected interests?
Q4: How important is it that creativity be included in the gifted identification process for students?
Q5: How important is it that a student exhibit curiosity and ask questions?
Q6: How important is it that a student exhibits a strong sense of social justice and question authority around equity?
Q7: How important is to identify students early for gifted services?
Q8: How important is it for teachers to understand how gifted behaviors manifest across various income groups?
Q9: How important is it to include nonverbal measurements in the gifted identification process for students?
Q10: How important is it that the curriculum and strategies used reflects students' learning preferences?
Q11: How important is it to include checklists in the gifted identification process for students?
Q12: How important is it that students engage in alternative processes and critical thinking?
Q13: How important is it that student demonstrates above-average ability in the gifted identification process?
Q14: How important is it to understand the cultural backgrounds of a student in the gifted identification process?
Q15: How important is it to involve the parents in the gifted identification process for students?

Q16: How important is a student's behavior and social interactions in the gifted identification process?

Q17: How important is socio-economic status in the gifted identification process of the students?

Q18: How important is a student's special education status in the gifted identification process?

Q19: How important is a student's motivation in starting new tasks and learning new concepts in the gifted identification process?

Q20: How important is it that a student perform well on regular classroom curriculum (grades, standardized tests, etc.)?

Q21: How important is multiple criteria (IQ/achievement, creativity, leadership, motivation) in the gifted identification process?

Q22: How important is it to ONLY include teacher nominations, referrals, and checklists to identify students for gifted services?

Q23: How important is it that teachers have training in multicultural education?

Q24: How important is it that a teacher observes students in various settings to note manifestations of advanced abilities?

Q25: How important is it that a teacher to allow for creativity to be demonstrated in a positive or negative manner?

Q26: How important is it that teachers have training in gifted education?

Q27: How important is it to that the curriculum is relevant to the culture and heritage of the school's population?

Q28: How important is it create colorblind interactions when working with students?

Q29: How important is it that teachers require the use of standard English language?

Q30: How important is it for students to critique social and cultural concepts and themes?

Q31: How important is it to accept several ways for students to express themselves orally and in the written form?

Q32: How important is it that a student follows classroom rules and expectations in the gifted identification process?

Q33: How important is it that teachers understand their own culture and heritage?

Q34: How important is it that teachers critique social and cultural concepts and themes, in current and past events?

ITID-Q: Version 3 (Final)

Q6 You have just been assigned to teach at Booker T. Washington Elementary, located in an urban metropolitan area. The elementary school campus is a Title I campus, a school with high numbers or high percentages of children from low-income families. The campus is comprised of approximately 400 students, with 77% of the students African American, 16% Hispanic, and 5% Caucasian, compared to the district which is 53% African American, 22% Hispanic, and 19% Caucasian. Of the 400 students, 98% of students qualify for free/reduced lunch, and approximately one percent (4 students) of the population is identified as gifted/advanced. This is your principal's first year on the campus, and there are several new teachers as well. Your principal is pushing for higher test scores on statewide assessments, but the district has an initiative to increase the gifted student enrollment. You along with other teachers have been assigned to the Greater Minds vertical team that is charged with recreating the gifted program at your school. You all are creating a rubric, establishing norms, and hoping to identify more students for the program. Using your knowledge of gifted students and details of this scenario, rate the level of importance of each of the items, in order to redesign the gifted program at Booker T. Washington Elementary.

Q1 Questionnaire Item: Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it that achievement and intelligence tests be used in the gifted identification process for students? (1)	☐	☐	☐	☐	☐

Q2 Questionnaire Item: Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it that a student conforms to peer group expectations/norms? (1)	☐	☐	☐	☐	☐

Q3 Questionnaire Item: Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it that a teacher make time available for students to pursue self-selected interests? (1)	☐	☐	☐	☐	☐

Q4 Questionnaire Item: Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it that creativity be included in the gifted identification process for students if they will be given services? (1)	☐	☐	☐	☐	☐

Q5 Questionnaire Item: Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it that a student ask questions and exhibit curiosity? (1)	☐	☐	☐	☐	☐

Q6 Questionnaire Item: Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it that a student exhibits a strong sense of social justice? (1)	☐	☐	☐	☐	☐

Q7 Questionnaire Item: Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is to identify students early for gifted services? (1)	☐	☐	☐	☐	☐

Q8 Questionnaire Item: Based on your knowledge of gifted students, please indicate the level of importance for the following item

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it for teachers to understand how gifted behaviors manifest across varied income groups? (1)	☐	☐	☐	☐	☐

Q9 Questionnaire Item: Based on your knowledge of gifted students, please indicate the level of importance for the following item

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it to include nonverbal measurements in the gifted identification process for students? (1)	☐	☐	☐	☐	☐

Q10 Questionnaire Item: Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it that the curriculum and strategies used reflects students' learning preferences? (1)	☐	☐	☐	☐	☐

Q11 Questionnaire Item: Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it to include checklists (students, parents, teachers) in the gifted identification process for students? (1)	☐	☐	☐	☐	☐

Q12 Questionnaire Item: Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it that students engage in alternative processes (problem solving) and critical thinking? (1)	☐	☐	☐	☐	☐

Q13 Questionnaire Item: Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it that students demonstrate above-average achievement ability in the gifted identification process? (1)	☐	☐	☐	☐	☐

Q14 Questionnaire Item: Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it to understand the cultural background (s) of a student in the gifted identification process? (1)	☐	☐	☐	☐	☐

Q15 Questionnaire Item:Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it to involve the parents in the gifted identification process for students? (1)	☐	☐	☐	☐	☐

Q16 Questionnaire Item: Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is a student's behavior and social interactions in the gifted identification process? (1)	☐	☐	☐	☐	☐

Q17 Questionnaire Item:Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is socio-economic status in the curricular approach and development of the students? (1)	☐	☐	☐	☐	☐

Q18 Questionnaire Item:Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is a student's special education status in the gifted identification process? (1)	☐	☐	☐	☐	☐

Q19 Questionnaire Item:Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is a student's motivation in starting new tasks and learning new concepts in the gifted identification process? (1)	☐	☐	☐	☐	☐

Q20 Questionnaire Item:Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it that a student perform well on regular classroom curriculum (grades, standardized tests, etc.) (1)	☐	☐	☐	☐	☐

Q21 Questionnaire Item:Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is multiple criteria (IQ, achievement, creativity, leadership, motivation) in the gifted identification process? (1)	☐	☐	☐	☐	☐

Q22 Questionnaire Item:Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it to ONLY include teacher nominations and referrals to identify students for gifted services? (1)	☐	☐	☐	☐	☐

Q23 Questionnaire Item:Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it that teachers have training in multicultural education? (1)	☐	☐	☐	☐	☐

Q24 Questionnaire Item:Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it that a teacher observes students in various settings to note manifestations of advanced abilities? (1)	☐	☐	☐	☐	☐

Q25 Questionnaire Item:Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it that a teacher allow for creativity to be demonstrated in a positive or negative manner? (1)	☐	☐	☐	☐	☐

Q26 Questionnaire Item:Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it that teachers have training in gifted education? (1)	☐	☐	☐	☐	☐

Q27 Questionnaire Item:Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it that the curriculum is relevant to the culture and heritage of the school's population? (1)	☐	☐	☐	☐	☐

Q28 Questionnaire Item:Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it to operate in a colorblind approach when interacting with students? (1)	☐	☐	☐	☐	☐

Q29 Questionnaire Item:Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it that teachers require the use of mainstream English? (1)	☐	☐	☐	☐	☐

Q30 Questionnaire Item:Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it for students to critique social and cultural concepts and themes? (1)	☐	☐	☐	☐	☐

Q31 Questionnaire Item:Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it to accept several ways for students to express themselves? (1)	☐	☐	☐	☐	☐

Q32 Questionnaire Item:Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it that a student follows classroom rules and expectations when referring for gifted services? (1)	☐	☐	☐	☐	☐

Q33 Questionnaire Item:Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it that teachers understand their own culture and heritage? (1)	☐	☐	☐	☐	☐

Q34 Questionnaire Item:Based on your knowledge of gifted students, please indicate the level of importance for the following item:

	Not Important at All (1)	Of Little Importance (2)	Of Average Importance (3)	Important (4)	Very Important (5)
How important is it that teachers critique social and cultural concepts and themes, in current and past events? (1)	☐	☐	☐	☐	☐

D Demographics

D1 Gender:

- ☐ Female (1)
- ☐ Male (2)
- ☐ How would you describe your gender: (3) _____

D2 Age:

- ☐ 17-20 (1)
- ☐ 21-24 (2)
- ☐ 25-29 (3)
- ☐ 30-39 (11)
- ☐ 40-49 (12)
- ☐ 50-59 (13)
- ☐ 60+ (14)

D3 How do you identify?

- ☐ Multiracial American (1)
- ☐ African American (2)
- ☐ White American/Caucasian (3)
- ☐ Hispanic/Latino/Latina (4)
- ☐ Native American (5)
- ☐ Asian American/Pacific Islander (6)
- ☐ Other: (7) _____

D4 Were you identified for the Gifted and Talented Program and received gifted services in elementary, middle, or high school?

- ☐ Yes (1)
- ☐ No (2)

D5 Have you received any multicultural education training (courses, professional development, etc.)?

- ☐ Yes (1)
- ☐ No (2)

D6 Have you received any gifted education training (courses, professional development, etc.)?

- ☐ Yes (1)
- ☐ No (2)

D6 Are you a first-generation college student? First-generation is defined as a student with neither parent having any education beyond high school.

- ☐ Yes (1)
- ☐ No (2)

APPENDIX B: ITID-Q Analysis and Responses

Table 2
ITID-Q Expert Committee Data and Item Review

Questionnaire Item	Accept (as is) Percent of Items	Revise Percent of Items	Reject Percent of Items
Item 1	71% (5)	29% (2)	0% (0)
Item 2	14% (1)	72% (5)	14% (1)
Item 3	71% (4)	14% (1)	14% (2)
Item 4	100% (7)	0% (0)	0% (0)
Item 5	86% (6)	14% (1)	0% (0)
Item 6	86% (6)	14% (1)	0% (0)
Item 7	71% (5)	29% (2)	0% (0)
Item 8	100% (7)	0% (0)	0% (0)
Item 9	100% (7)	0% (0)	0% (0)
Item 10	100% (7)	0% (0)	0% (0)
Item 11	100% (7)	0% (0)	0% (0)
Item 12	100% (7)	0% (0)	0% (0)
Item 13	86% (6)	14% (1)	0% (0)
Item 14	86% (6)	14% (1)	0% (0)
Item 15	86% (6)	14% (1)	0% (0)
Item 16	100% (7)	0% (0)	0% (0)
Item 17	86% (6)	14% (1)	0% (0)
Item 18	100% (7)	0% (0)	0% (0)
Item 19	100% (7)	0% (0)	0% (0)
Item 20	100% (7)	0% (0)	0% (0)
Item 21	100% (7)	0% (1)	0% (0)
Item 22	100% (7)	0% (0)	0% (0)
Item 23	71% (5)	14% (1)	14% (1)
Item 24	100% (7)	0% (0)	0% (0)
Item 25	100% (7)	0% (0)	0% (0)
Item 26	86% (6)	14% (1)	0% (0)
Item 27	100% (7)	0% (0)	0% (0)
Item 28	86% (6)	14% (1)	0% (0)
Item 29	86% (6)	0% (0)	14% (1)
Item 30	71% (5)	14% (1)	14% (1)
Item 31	100% (7)	0% (0)	0% (0)
Item 32	100% (7)	0% (0)	0% (0)
Item 33	71% (5)	14% (1)	14% (1)
Item 34	100% (7)	0% (0)	0% (0)
Item 35	100% (7)	0% (0)	0% (0)

Table 3.
ITID-Q Composite Diversity Score

Composite Score Ranking	Range
Poor	0-20
Acceptable	21-28
Excellent	29-34

PCA Analysis

Factor 1: Historical Perspectives Identification Criteria (HPIC). The first factor is composed of the items associated with common, mainstream identifiers for gifted identification. The construct is comprised of 7 items: 1, 2, 13, 20, 22, 29, 32 (see Table 3). The measure of internal reliability, Cronbach's alpha coefficient, was acceptable ($\alpha=.798$).

Factor 2: Teacher's Lens (TL). The second factor is composed of the items associated with the teacher's perspective of the traits, attributes, and behaviors underserved students display. The construct is comprised of 6 items: 6, 14, 24, 30, 31, 33 (see Table 3). Alpha if item-deleted was higher here with the removal of item 34, and the measure of internal reliability, Cronbach's alpha coefficient, was acceptable ($\alpha=.733$).

Factor 3: Culturally Responsive Student-centered Approaches (CRSCA). The third factor is composed of the items associated with culturally responsive student-centered approaches. The construct is comprised of 5 items: 16, 17, 18, 23, 34 (see Table 3). The measure of internal reliability, Cronbach's alpha coefficient, was acceptable ($\alpha=.735$).

Factor 4: Students' Learning Preferences (SLP). The fourth factor is composed of the items associated with students' learning preferences. The construct is comprised of 5 items: 3, 8, 10, 14, 27 (see Table 3). The measure of internal reliability, Cronbach's alpha coefficient, was questionable ($\alpha=.651$).

Factor 5: Assessment Processes (AP). The fifth and final factor is composed of the items associated with assessment processes. The construct is comprised of 4 items: 4, 7, 9, 12 (see Table 3). The measure of internal reliability, Cronbach's alpha coefficient, was poor ($\alpha=.532$).

Table 3. Concluding list of items in ITID-Q after final PCA; n=125.

		Component				
Item		Historical Perspectives Identification Criteria	Teacher's Lens	Culturally Responsive Student-centered Approaches	Students' Learning Preferences	Assessment Processes
20	Student performance	.782	-	-	-	-
13	Above average ability	.744	-	-	-	-
29	Teacher requires mainstream English	.709	-	-	-	-
32	Student follow classroom rules and expectations	.650	-	-	-	-
1	Achievement and Intelligence tests	.634	-	-	-	-
22	Only teacher referrals and nominations	.601	-	-	-	-
2	Student conforms to peer group norms	.548	-	-	-	-
24	Teacher observes in various settings	-	.714	-	-	-
15	Parent Involvement	-	.552	-	-	-
33	Teachers understand their culture and heritage	-	.540	-	-	-
6	Student exhibits social justice	-	.540	-	-	-
30	Students critique social and cultural themes	-	.531	-	-	-
31	Teachers accept student expression in several ways	-	.526	-	-	-
16	Student's behavior and social interactions	-	-	.712	-	-
18	Special education status	-	-	.694	-	-
17	SES status is considered in curricular approach	-	-	.639	-	-
34	Teacher's critique social and cultural concepts	-	-	.598	-	-
23	Teachers have multicultural training	-	-	.534	-	-
10	Curriculum and strategies reflect student preferences	-	-	-	.692	-
8	Teachers understand gifts and talents manifest across income	-	-	-	.623	-
14	Teachers understand students' cultural backgrounds	-	-	-	.580	-
27	Culturally relevant curriculum	-	-	-	.464	-
3	Self-selected interests	-	-	-	.429	-

4	Creativity is included in gifted identification process	-	-	-	-	.679
7	Early Identification	-	-	-	-	.607
9	Nonverbal Assessments used in identification process	-	-	-	-	.565
12	Student engage in alternative processes	-	-	-	-	.484

Table 4. Means and reliabilities of ITID-Q factors.

Factors	Means	Cronbach's α
Historical Perspectives Identification Criteria	.372	.798
Teacher's Lens	.365	.789
Culturally Responsive Student-centered Approaches	.377	.735
Students' Learning Preferences	.281	.651
Assessment Processes	.253	.532

Pre-Service Teacher Demographic Data_ Pilot Instrument

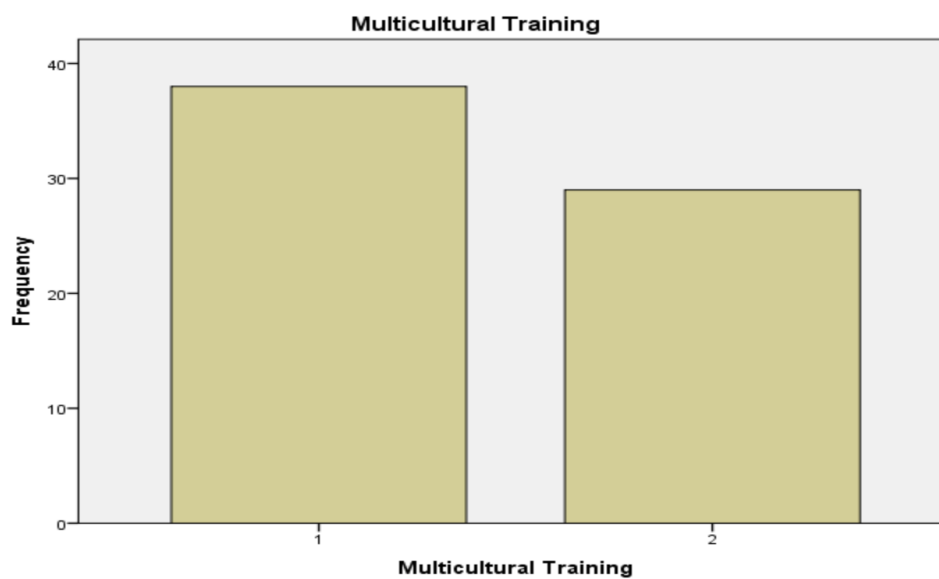
Gifted Training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	8	11.9	11.9	11.9
	2	59	88.1	88.1	100.0
	Total	67	100.0	100.0	



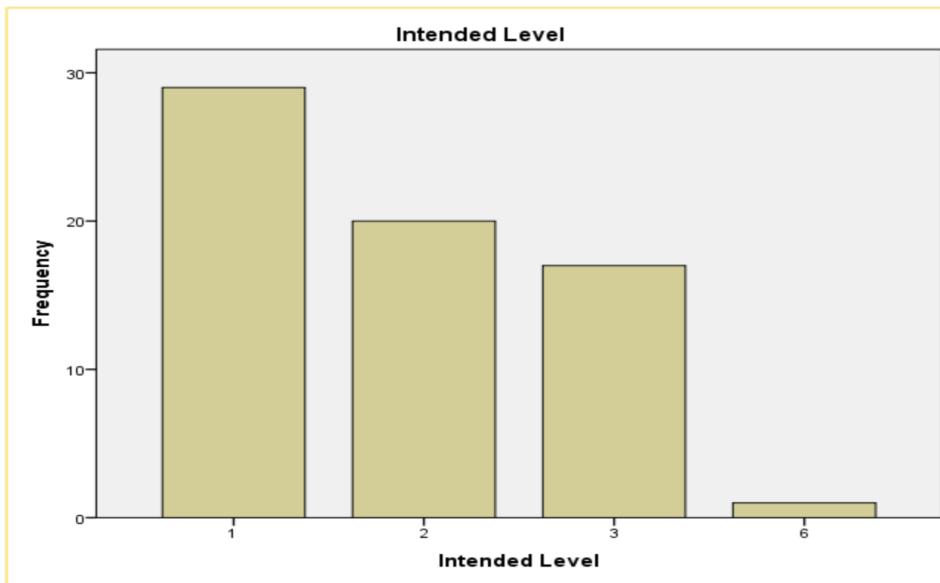
Multicultural Training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	38	56.7	56.7	56.7
	2	29	43.3	43.3	100.0
	Total	67	100.0	100.0	



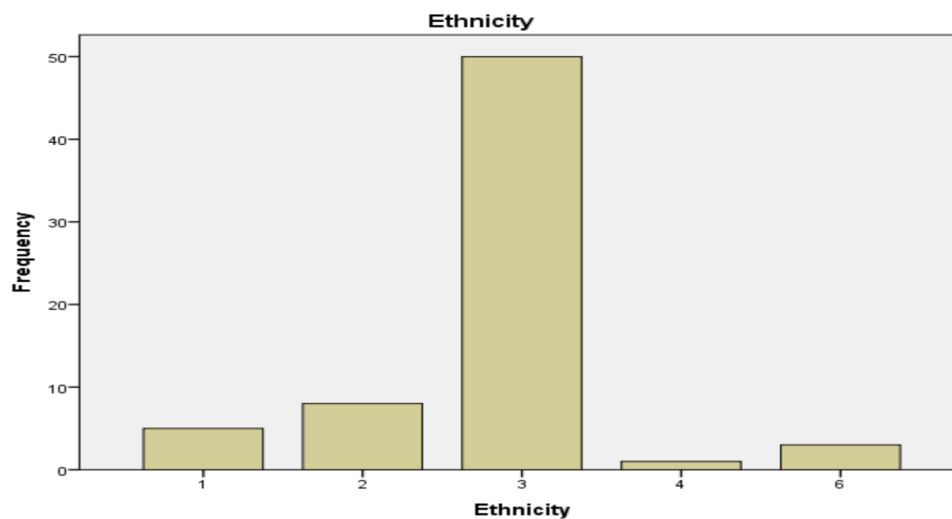
Intended Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	29	43.3	43.3	43.3
	2	20	29.9	29.9	73.1
	3	17	25.4	25.4	98.5
	6	1	1.5	1.5	100.0
	Total	67	100.0	100.0	



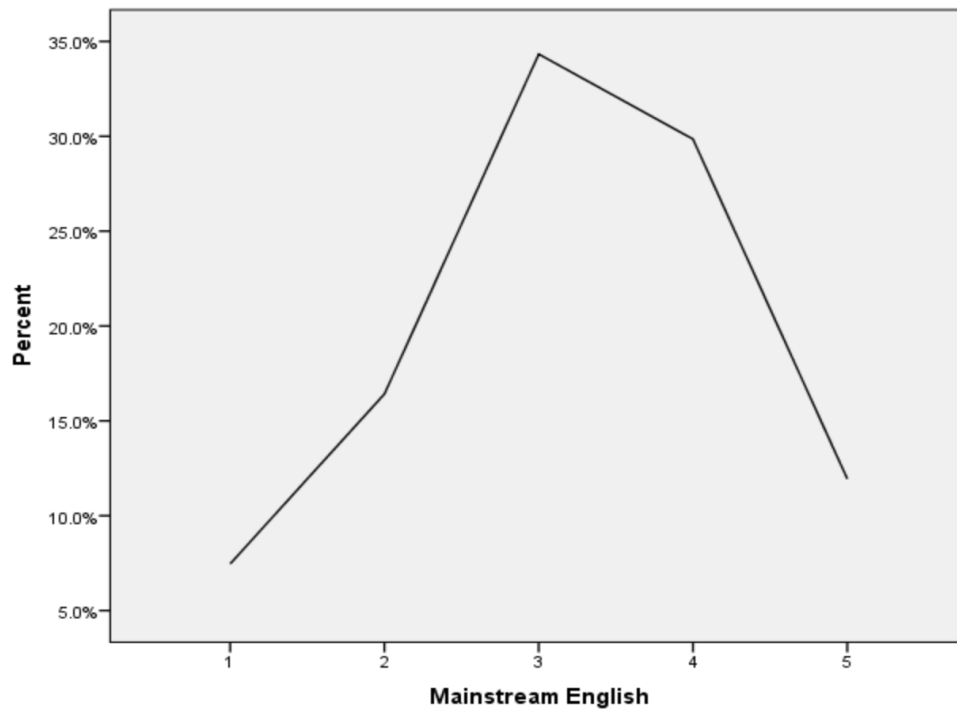
Ethnicity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	5	7.5	7.5	7.5
	2	8	11.9	11.9	19.4
	3	50	74.6	74.6	94.0
	4	1	1.5	1.5	95.5
	6	3	4.5	4.5	100.0
	Total	67	100.0	100.0	

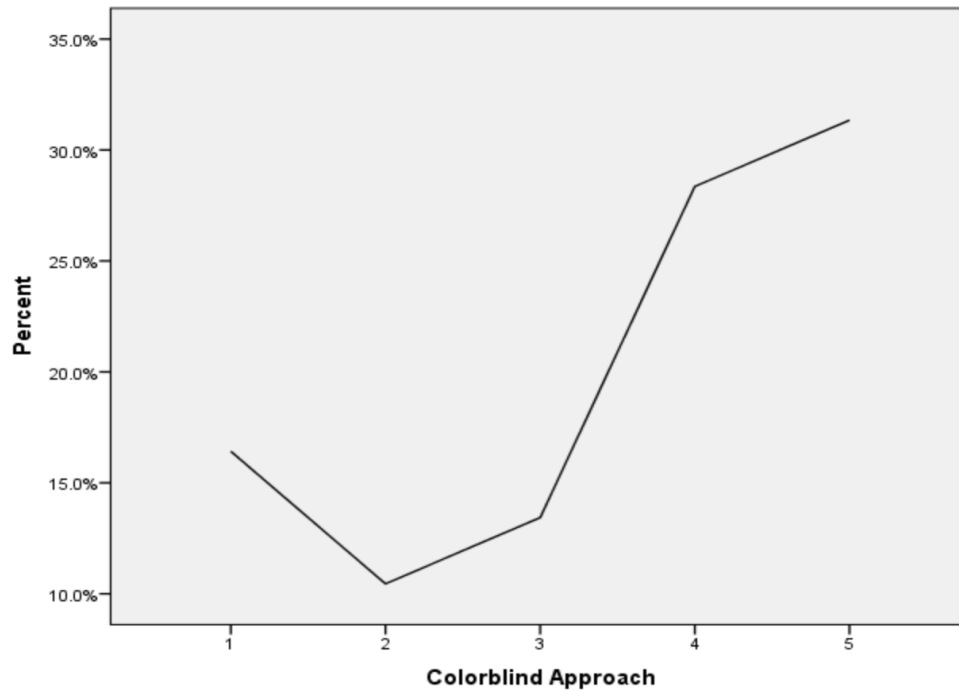


Pre-Service Teacher Likert Responses_Pilot Instrument

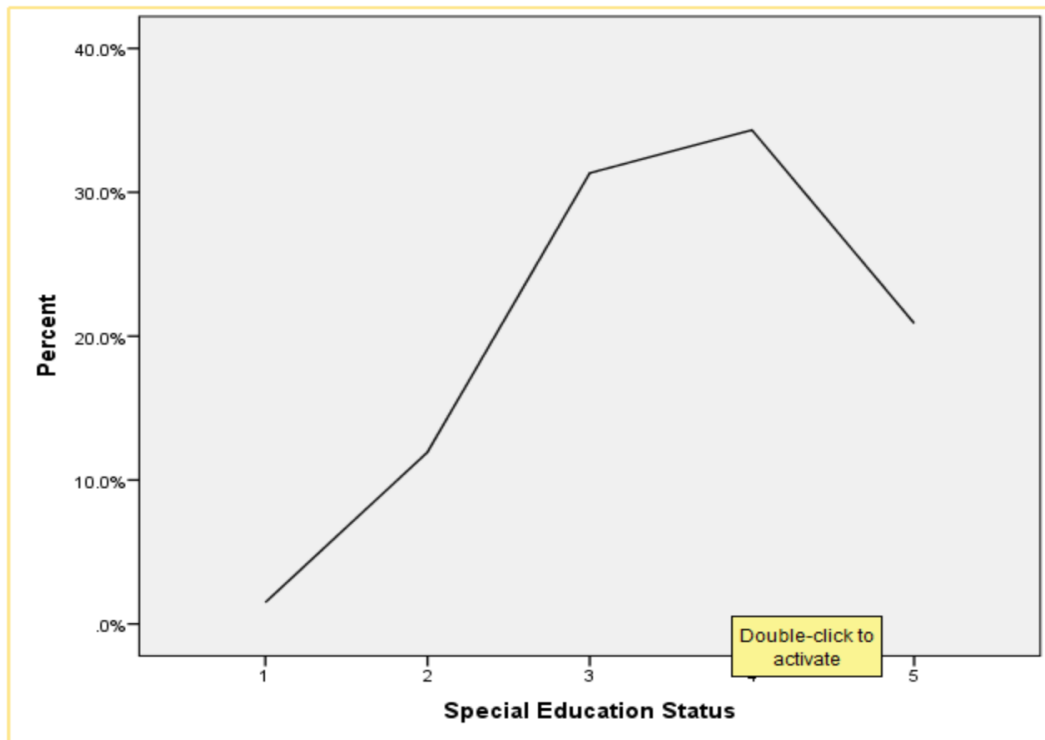
Graph



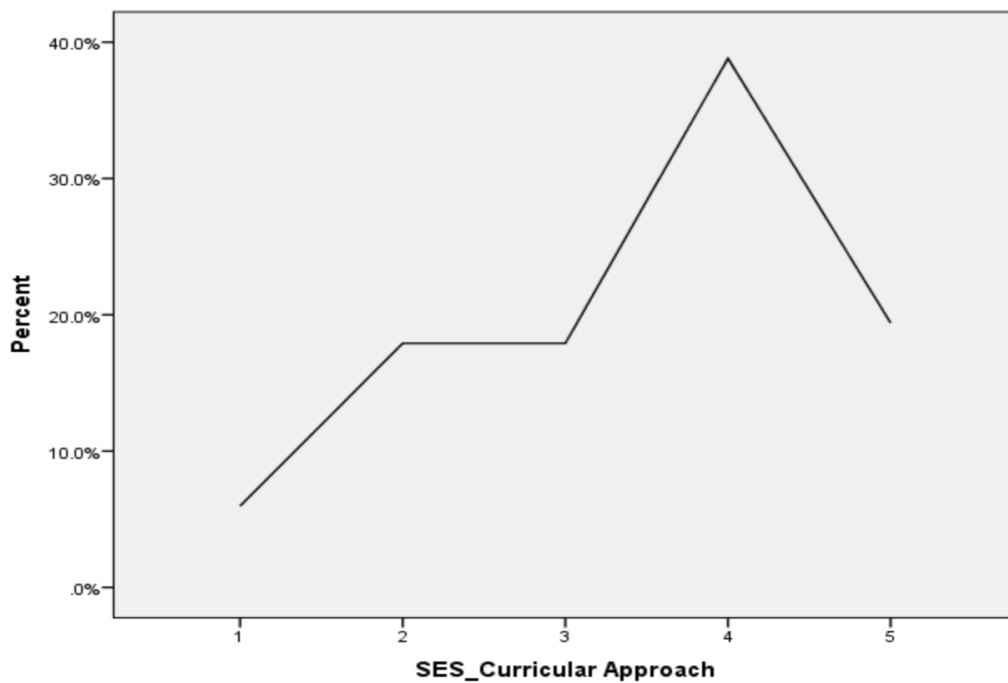
Graph



Graph



Graph



APPENDIX C: 4Ps of the Culturally-Ready Educator

Table 1. Definitions of the 4 Ps of Being a Culturally Ready Gifted Educator

	Definition
Person	Educators understand the needs and characteristics of culturally, linguistically, and economically diverse students. This includes cultural styles, learning preferences
Press	Educators create an environment that is psychologically safe, and employs culturally responsive strategies and techniques. Educators also create an environment where clear and high expectations are established.
Process	Educators understand the types of curricular approaches, strategies, and materials that should be used to engage and challenge students
Product(s)	Educators provide students with the opportunity to display their emerging ideas and strengths. These products should be evidenced-based, preferably hands-on, problem, and/or project-based to engage the student.

Figure 1. The 4 Ps of the Culturally Ready Gifted Educator



Figure 1. Describes the interconnectedness and holistic approach of the 4 Ps being a culturally-ready gifted educator

Table 3. Suggested Resources to Teach the 4 Ps of Cultural Readiness

Strategies, Methods, and Materials	
Person	• Frasier's Talent Assessment Profile (Frasier, 1995) ○ Four A's ○ TABs (Traits, Aptitudes, Behaviors) • Creative Positives of Disadvantaged Students (Torrance, 1974) • Cultural Styles (Boykin, 1994) • Recruiting and Retaining Culturally Different Students in Gifted Education (Ford, 2013) • Gifted and Advanced Black Students in Schools (Grantham et al., 2011)
Press	<u>Culturally Responsive Strategies</u> ○ Culturally Responsive Teaching (Gay, 2000, Irvine, 1991) ○ Culturally Responsive Pedagogy (Ladson-Billings, 1995) ○ Other People's Children (Delpit, 1995) <u>Environments for Best Practice</u> ○ From Deficit to Dynamic Thinking (Ford & Grantham, 2003) ○ Beyond Cultureblindness (Ford, Moore, & Milner, 2005) ○ Cultivating Creative Thinking (Cramond & Connell, 2009) <u>Engaging Diverse Families</u> • Bright, Talented, & Black (Lawson-Davis, 2010) • The Essential Conversation (Lawrence-Lightfoot, 2003) • Ecologies of Parental Engagement (Barton, et al., 2004)
Process	• Ford's Blooms-Banks Model (Ford, 2011) • Differentiated Instruction (Roberts & Inman, 2007) • Parallel Curriculum in Urban Settings (Kaplan, Guzman, Tomlinson, 2009) • Incubation Model of Teaching (Torrance, 1990) • Creativity Strategies ○ Creativity in the Classroom (Starko, 2013) ○ Nurturing Creativity in the Classroom (Beghetto & Kaufman, 2010) ○ Teaching for Creativity in the Common Core (Beghetto, Kaufman, & Baer, 2015)

- Creativity and Its Educational Implications

Product(s)

Methods and Materials for Teaching (Karnes & Bean, 2009)

- Instructional Planning and Evaluation
- Independent Study
- Problem-based Learning
- Project-based Learning

Portfolio Development

- Schoolwide Enrichment Model (Renzulli & Reis, 2014)
 - Student Talent Portfolios (Kettle & Siegle, 2015)
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