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# Beyond Special and General Education as Identity Markers: The Development and Validation of an Instrument to Measure Preservice Teachers' Understanding of The Effects of Intersecting Sociocultural Identities

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FLORIDA INTERNATIONAL UNIVERSITY

Miami, Florida

BEYOND SPECIAL AND GENERAL EDUCATION AS IDENTITY MARKERS:  
THE DEVELOPMENT AND VALIDATION OF AN INSTRUMENT TO MEASURE  
PRESERVICE TEACHERS' UNDERSTANDING OF THE EFFECTS OF  
INTERSECTING SOCIOCULTURAL IDENTITIES

A dissertation submitted in partial fulfillment of the

requirements for the degree of

DOCTOR OF EDUCATION

in

EXCEPTIONAL STUDENT EDUCATION

by

Mildred Boveda

2016

To: Dean Michael R. Heithaus  
College of Arts, Sciences and Education

This dissertation, written by Mildred Boveda, and entitled Beyond Special and General Education as Identity Markers: The Development and Validation of an Instrument to Measure Preservice Teachers' Understanding of the Effects of Intersecting Sociocultural Identities, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

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Date of Defense: October 26, 2016

The dissertation of Mildred Boveda is approved.

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Dean Michael R. Heithaus  
College of Arts, Sciences and Education

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Andrés G. Gil  
Vice President for Research and Economic Development  
and Dean of the University Graduate School

Florida International University, 2016

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## DEDICATION

Mamá. Nunca tuvo acceso a una educación formal. Sin embargo, se sacrifico con el fin de que mis hermanos y yo lo haría. Su ejemplo, bondad, humildad, sabiduría y oraciones son las razones que puedo escribir estas palabras. Doy gracias a Dios por honrarme con una madre como la mía.

To Nathan Boveda, my best friend. Thank you for being an exemplary father to our children and our loves: Leah, Nathan, and Nicole. Thank you for loving my mother as she was your own and collaborating with her to support and sustain me during this journey. Thank you most of all for your integrity.

“Iron sharpens iron,

So one man sharpens another”

(Proverbs 27:17, New American Standard Bible).

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I am grateful to my family for always believing in me. I continue to aspire to earn their respect and approval. “Family” also includes my church family. The first time I

learned to analyze text, think critically, or heard the word “scholar” all occurred in the presence of fellow believers. I am blessed to have such a large and colorful family.

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ABSTRACT OF THE DISSERTATION

BEYOND SPECIAL AND GENERAL EDUCATION AS IDENTITY MARKERS:  
THE DEVELOPMENT AND VALIDATION OF AN INSTRUMENT TO MEASURE  
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by

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Florida International University, 2016

Miami, Florida

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Intersectionality theory explores the complexities of the interactions of multiple markers of difference. Intersectionality holds great potential as a concept for preservice teachers' understanding of diversity because it can inform collaborative efforts with diverse stakeholders, enhance preservice teachers' understanding of diverse learners, and facilitate an integrated treatment of diversity in teacher preparation research. The researcher uses the term "intersectional competence" to describe preservice teachers' understanding of diversity and how students, families, and colleagues have multiple sociocultural markers that intersect in nuanced and unique ways.

The purpose of the study was to identify the indicators that best capture intersectional competence and to develop and validate an instrument that measures preservice teachers' intersectional competence. The researcher drew from the literature on intersectionality in special education, the research on collaborative teacher preparation, and assessments of preservice teachers' understanding of diversity to



identify indicators of the intersectional competence construct. The instrument included two subsets of items. Subset A was a survey designed for preservice teachers to self-report their intersectional competence and Subset B consisted of items of a case-based measure of preservice teachers' intersectional competence. A mixed-methods sequential exploratory research design was used to develop and validate the instrument.

During the qualitative phase, the researcher collected data that strengthened the theoretical basis for validating the instrument (i.e., interviews with focus groups, consulting with experts, and cognitive pre-testing). Throughout the qualitative phase, general education and special education preservice teachers were able to recognize and discuss the complexities of intersecting sociocultural categories. The second phase of the study involved the quantitative analysis of the validity and reliability estimates established for the instrument and the piloting of the items with 107 participants. The piloted draft of the ICM was upheld to be a reliable tool to assess whether preservice teachers are adequately competent to meet the needs of a complex and diverse school population. The feedback about each subset of the pilot of the ICM, as well as feedback about the instrument as a whole, indicate that the ICM will require further development and item refinement.

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# CHAPTER I

## INTRODUCTION

In the current adoptions by states of the Common Core Standards, collaboration is put forth as a 21<sup>st</sup> century skill that all students must possess in order to be college and career ready. Educators who are concerned with the outcomes of all learners – including students with diverse learning needs and cultural or linguistic origins - must examine the ways that they model collaboration for their students. Teacher preparation programs also need to consider how best to prepare teacher candidates to work with diverse learners and to collaborate with diverse colleagues and parents. Collaboration requires teachers to engage in purposeful and thoughtful reflection about how to build partnerships with colleagues and students’ families, especially when working with partners whose backgrounds differ from that of their own. It is imperative to frame collaboration efforts around students’ needs, and to consider that each student is situated within a context that is not just the classroom and school, but also a family, community, and society at large (Boyd & Correa, 2005; Harry, 2008; Kozleski, Artiles, & Skrtic, 2014). If, as Grant and Zwier (2011) suggested, teachers must “develop and strategically use intersectional knowledge about their students’ backgrounds for instructional purposes” (p. 182), it is critical that teachers have the capacity to glean information about students when collaborating with colleagues and families.

Although the general education classroom has become increasingly diverse, the concept of diversity is applied unevenly in research throughout the field (Pugach & Seidl, 1996; Waitoller & Artiles, 2013; Welch, 1996). Disability is often mentioned within the greater discussion of student diversity, but the conceptualization of diversity in teacher

education has developed separately and disparately from that of disability (Cochran-Smith & Dudley-Marling, 2012; Pugach & Seidl, 1996). The divide seems to be more apparent when comparing general education teacher preparation with special education teacher preparation (Pugach & Seidl, 1998). For example, in a recent review of research on collaboration between general education and special education faculties in teacher preparation programs, Pugach, Blanton, and Boveda (2014) found that diversity is primarily framed in terms of students' abilities. On the other hand, proponents of cultural responsiveness and multicultural education have inconsistently included disability in discussions and analyses of diversity (Welch, 1996). For example, *Studying Diversity in Teacher Education*, a book published by the American Educational Research Association, included only one chapter that discussed students with disabilities. The authors of the chapter chose to "devote most attention to Black students" (Scott & Ford, 2011, p. 202). When examining the literature on professional development research from around the globe, Waitoller and Artiles (2013) found that the concept of inclusion is more narrowly applied in journals from the United States (U.S.) than it is in international journals. That is, in the U.S. the term inclusion is primarily limited to discussions of students with ability differences within the general education classroom, while in the "international community inclusive education is concerned with a broad equity agenda for all students" (p. 321).

Reviewers of empirical research on preservice teacher preparation for diverse populations (Hollins & Guzman, 2005) and the integration of multicultural education in general education and special education programs (Trent, Kea, & Oh, 2008; Webb-Johnson, Artiles, Trent, Jackson, & Velox, 1998) found that these studies often lacked

clearly defined conceptual and theoretical underpinnings, provided insufficient information about the context of the teacher education program, and too often focused on single attributes (e.g., race or language spoken at home) of culturally and linguistically diverse students. Some scholars in special education have called for a more nuanced and sophisticated approach to discussing diversity, one that goes beyond culture as group attributes (e.g., Artiles, 2011; Artiles, Kozleski, Trent, Osher, & Ortiz, 2010; Waitoller & Artiles, 2013) and beyond research on cultural minorities (Arzubiaga, Artiles, King, & Harris-Murri, 2008). Seidl and Pugach (2009) argued for special education teacher education that places emphasis on the sociocultural context of students' learning and development and the need to explore preservice teachers' understanding of their work as central members of "intercultural mediation teams" (p. 65).

As special education teacher faculty are increasingly coordinating and collaborating with their colleagues from other departments, it becomes increasingly necessary to close the gap created by the lack of consensus between general and special education regarding how to approach and frame diversity (Cochran-Smith & Dudley-Marling, 2012; Pugach & Seidl, 1996, 1998). Collaboration, whether in research or in practice, requires a theoretical, "overriding framework" (Pugach & Seidl, 1998, p. 319) that can help collaborators go beyond a unitary approach to diversity (Hancock, 2007; Waitoller & Artiles, 2013) and account for the intersection of multiple diversities.

### **Special Education, Equity, and Diversity in Teacher Education**

Since the policymakers who constructed the No Child Left Behind (NCLB) Act of 2001 identified students in special education as one of the subgroups at a school that must show adequate yearly progress, a requirement that continues in the current Every Student



Succeeds Act (ESSA), the pressure has mounted on all states and local education agencies to close the achievement gap between students with disabilities and their non-disabled peers. The problem of closing achievement gaps becomes further complicated when considering disproportionality and the fact that, within disability categories, there are gaps when comparing outcomes of students of color with that of their White, middle class peers. “And, where achievement gaps exist for students within disability categories, based on race, equity concerns deepen with the ways in which special education is currently constructed and delivered” (Artiles et al., 2010, p. 285).

The intersection of disability and other markers of diversity is not only of consequence for the preparation of special education teachers but is of importance for the research, policy and practices enacted in the preparation of *all teachers*. Today, over 60% of students with disabilities spend 80% or more of their instructional day in the general education setting (Aud et al., 2013). The 2002 report of the Committee on Representation of Minority Students of the National Research Council (Donovon & Cross, 2002) emphasized systemic issues in special education and the role that general education has in the education and initial placement patterns of students with disabilities. A 2002 Special Education Elementary Longitudinal Study (SRI International, 2002) that involved over 11,000 students revealed that, on average, students with disabilities who spend most of their time in general education classrooms tended to have better attendance, performed closer to grade level than their peers in the resource room or separate class settings, and had higher achievement test scores (Artiles et al., 2010; Blackorby et al., 2005). Yet it continues to be documented that, for example, Black students are more likely to be placed in more restrictive learning environments than their

peers (Losen, Ee, Hodson, & Martinez, 2015; Skiba, Poloni-Straudinger, Gaillini, Simmons, & Feggins-Azziz, 2006).

Although disproportionality of students in special education is a complex issue that involves numerous factors, nevertheless, “the critical importance of preparing general and special education teachers in nonbiased assessment, culturally relevant instruction, and culturally responsive classroom management practices... cannot be overstated” (Correa, McHatton, McCray, & Baughan, 2014, p. 195). Kea and Utley (1998) considered the possible relationship between the problem of disproportionality and the preparation of teachers and suggested that general education teachers who have been inadequately prepared to respond to students’ cultural or linguistic diversity over-referred minority students to special education. Moreover, novice teachers are more likely to be assigned “low-achieving, behaviorally challenged students than their counterparts” (Kozleski, Artiles, McCray, & Lacy, 2014, p.121). In addition to ability considerations, schools that have a higher enrollment of non-White students have a higher percentage of teachers with less than 10 years of experience (Kozleski et al., 2014). In other words, teachers who are newly entering the workforce are more likely to be assigned non-White students and students who have “low achievement profiles” (p. 120).

In a special issue of the *Journal of Teacher Education*, editors Pugach, Blanton, and Florian (2012) sparked an important dialogue about how special education teacher educators can collaborate with other teacher educators to prepare preservice teachers to meet the needs of diverse learners. The editors sought to explore teacher education that is responsive to the “full range of diversity of students and that takes account the multiple

markers of identity that characterize individuals and groups of students – disability among them” (p. 235). The scholars featured in this special issue discussed and challenged the divergence in how teacher educators from general and special education address diversity. Rueda and Stillman (2012), for example, critiqued the ways that traditional teacher preparation programs provide teacher candidates instruction on multicultural, bilingual, and special education. Instead of leaving preservice teachers to make independent connections across multiple, discrete courses, Rueda and Stillman argued for an integrated approach that involves thoughtful collaboration between teacher educators from various communities (e.g., social justice, special education, and bilingual teacher educators).

### **Collaboration Research: Privileging Disability over Other Markers of Differences**

In the *Handbook of Research on Special Education Teacher Preparation*, Pugach et al. (2014) reviewed studies published in peer-reviewed journals that brought general and special education preservice faculty together for the purpose of preparing teacher candidates in general and special education programs to implement inclusive practices. The review revealed that diversity was not a prevalent concern in these collaborative studies. When the term “diverse” emerged in the studies, it was typically framed within discussions of the participants’ academic or departmental backgrounds or to reference the diverse learning needs of K-12 learners. Similar to Trent et al. (2008), Pugach et al. (2014) found that the demographic information about the participants was included inconsistently, and the sociocultural markers of the participants were seldom considered in the analysis.

Current research of teacher educators who are collaborating across departments seldom attends to the intersectional treatment of “social identity markers in addition to disability” (Pugach et al., 2014, p. 154). In one exploratory study that examined the extent that diversity appeared within the curricula of three fully merged, dual licensure teacher education programs, Pugach and Blanton (2012) found that there was a tendency to privilege disabilities over other markers of difference, such as students’ race, class, and linguistic background. Despite Waitoller and Artiles’ (2013) hopeful assertion that inclusive education “can serve as a catalyst to examine and address forms of exclusion related to intersections of disability/ability, race, gender, language, and social class differences” (p. 339), the current research on teacher preparation for inclusive practices places greater emphasis on students’ ability differences. To address the lack of a comprehensive view of diversity in teacher education research, some scholars have suggested intersectionality as a framework to improve teacher preparation (e.g., Grant & Zwier, 2011) and as an analytical tool that addresses diversity beyond the narrow focus of students’ disabilities categories (Waitoller & Artiles, 2013; Waitoller & Kozleski, 2013).

### **Intersectionality and Empiricism:**

#### **From Black Feminist Thought to a Research Paradigm**

Scholars who study diversity in special education are increasingly examining the intersection of disability with other markers of differences (Artiles, Kozleski, & Waitoller, 2011; Connor, 2008; McCall & Skrtic, 2009). Intersectionality, a term first put forth by Kimberlé Crenshaw (1989) and Patricia Hill Collins (1990), examines how several biological, social, and cultural categories such as gender, race, class, ability, and other aspects of identity interrelate on multiple, and often simultaneous dimensions. The

experiences at the intersection of identity markers and group categories contribute to systems of privilege and oppression, which Collins (2000) referred to as a “matrix of domination” (p.19). Intersectionality has origins in Black feminist theory but has received great attention in various fields including geography, political science, psychology, and education (Artiles, 2013). These studies and conceptual papers are often interdisciplinary (Bowleg, 2008; Hancock, 2007) and appear in both U.S. and international journals. “Examining intersectionality from multidisciplinary perspectives is a signature strength of scholarship on intersectionality” (Bowleg, 2008, p. 323). Despite its acceptance in multiple fields, there are still questions about how best to research intersectionality. Recently, the *Du Bois Review* featured a special issue on intersectionality with the goal of answering some of these questions and of providing a “precise,” historical trajectory of intersectionality research “across time, disciplines, issues, and geographic and national boundaries” (Carbado, Crenshaw, Mays, & Tomlison, 2013, p. 303).

One of the most salient features of intersectionality is that it provides the language needed to discuss the complexities involved when considering the intersection of multiple sociocultural markers. Complexity is also one of the most challenging aspects for researchers of intersectionality to overcome (Artiles 2013; Clarke & McCall, 2013; McCall, 2005; Nash, 2008). In an early effort to categorize intersectionality research in women’s studies, McCall (2005) described three approaches to the issue of complexity of categories within intersectionality research. The anticategorical complexity approach to intersectionality deconstructs analytical categories and is the approach that McCall identified as most prevalent in women’s studies. Users of this approach argue that the

rejection of categories is necessary to overcome oppression and inequities.

Intercategorical complexity is an approach where researchers suspend critiquing categories and use the existing categorical markers to analyze inequality. The intracategorical approach is one that simultaneously applies categories and holds a critical stance toward categories.

There are several examples of the variety of methodological tools employed to research intersectionality. Those who have studied intersectionality have done so using a range of qualitative and quantitative methods. Choo and Feree (2010) reviewed numerous examples of how sociologists use qualitative methods to study intersectionality and inequalities. Examples of quantitative methodologies in intersectionality research are Stiratt, Meyer, Ouellette, and Gara's (2008) application of hierarchical class analysis (HICLAS) and Steinbugler and Dias's (2006) analysis of quantitative survey data about affirmative action. Bowleg (2008) presented critiques on both quantitative and qualitative methods to studying intersectionality. She identified the contradiction between the assumptions behind the analytical approaches of qualitative and quantitative methods and the premise in intersectionality that social identities and inequality are interdependent and not mutually exclusive. Bowleg explored ways to develop questions to measure intersectionality, analyze data and interpret findings and cautioned researchers to be cognizant of the assumptions behind the data collection and analytical tools applied. Despite the challenges of researching intersectionality, Bowleg stated that "interpretation becomes one of the most substantial tools in the intersectionality researcher's methodological toolbox" (p. 312).

The former co-editors of *Multiple Voices for Ethnically Diverse Exceptional Learners* called on educators to turn to intersectionality as a framework for research and practice in special education (García, Ortiz, & Sorrels, 2012). Pointing to the persistence of disproportionate representation of minority groups in special education and the achievement gap of students with disabilities compared to their non-disabled peers, the editors contended that intersectionality is an alternative approach to “conceptualizing diversity, as well as to developing research designs and analytic frameworks that more effectively explicate societal and organizational structures that produce or maintain” social inequities (García et al., 2012, p.1). Similarly, Artiles (2013) recommended that special education and disability studies departments should prepare “the next generation of scholars with an intersectional imagination” (p. 342). Considering the call for more nuanced frameworks for addressing the multiple diversities of students in a comprehensive, integrated way, it is important to examine how intersectionality has developed as a research paradigm in order to effectively apply the theory to research and practice of teacher preparation.

The literature on intersectionality in special education is comprised of qualitative research and conceptual papers that examine intersectionality in terms of the experiences of students and graduates of P-12 school systems. Intersectionality is not discussed as it pertains to the intersecting identities of educators, policymakers or researchers, nor is it applied to explore how these stakeholders’ intersecting identities impact special education. Using McCall’s (2005) categorization, the intercategory complexity (or categorical; e.g., García & Ortiz, 2013; McCall & Skrtic, 2009) and the intracategory complexity approaches (e.g., Artiles 2013; Connor, 2008; Ferri & Connor, 2008) have

been used in special education intersectionality research. In this investigation, the researcher took the categorical approach to intersectionality and complexities because of the established categories in education policy and research and the well-documented, consequential effect of these categories (i.e., the funding implications of disability categories identified in the Individuals with Disabilities Education Act [IDEA]).

### **Measures of Preservice Teachers' Understanding of Diversity**

The preponderance of studies about diversity in preservice teacher preparation use attitude surveys and questionnaires to assess candidates' readiness to work with diverse student populations. Hollins and Guzman (2005) categorized the reliability and validity of studies about diversity in teacher education as weak, critiquing that most instruments have been researcher-developed, with validation procedures that often were not explained. When examining studies about diversity in special education teacher preparation, the assessments are dominated by measures of "dispositional factors" (McCall, McHatton, & Shealey, 2014, p. 51). These studies either addressed attitude toward students with disabilities and inclusion of students with disabilities or attitude toward culturally and linguistically diverse students (McCall et al., 2014); no attitudinal studies were identified that measured attitudes toward the intersection of these markers of difference. In addition to attitude surveys, performance-based assessments (Daunic, Correa, & Reyes-Blanes, 2004), and concept maps (Correa, Hudson, & Hayes, 2004; Trent & Dixon, 2004) have been developed to assess preservice teachers' preparedness to work with students with disabilities of culturally and linguistically diverse backgrounds.

Recent studies have emerged that describe the development of quantitative assessments to measure general education preservice teachers' cultural competence and



ability to work with students of diverse academic abilities. These studies often describe the development of multiple and distinct measures to account for candidates' attitudes toward students with disabilities and students of culturally and linguistically diverse backgrounds (Benton-Borghi & Chang, 2012; Pohan & Aguilar, 2001; Siwatu, 2007). The studies that developed a single instrument to measure cultural competence as a construct included indicators such as multicultural skills and knowledge (Spanierman et al., 2011) and willingness to rectify the adverse effects of institutionalized discrimination (Liang & Zhang, 2009), but the researchers pointed to the self-reported responses as a limitation of the measures. As McAllister and Irvine (2000) concluded, "studies using self-report instruments or interviews, participants may overrate their multicultural competencies or misrepresent their attitudes" (p. 12). Crowne and Marlow (1964) discussed three sources of non-random variance in self-reported measures. First, the approval motive describes the tendency for people to want to appear acceptable in the sight of others and to respond in ways that are socially desirable. A second source, self-flattery, results in responses that are based on personal biases or preferences rather than on attempts to be honest. The third potential source of non-random variance comes from the tendency to want to appear consistent across views expressed. These three plausible sources of non-random variance in self-reported data can produce substantial correlations and internal consistencies, but not of the desired types.

Finally, in their description of the development of an instrument for assessing cultural competence, Liang and Zhang (2009) expressed concerns that

... different forms of discrimination were experienced for different people in different contexts and for different reasons. Pre- service teachers may have high

expectation for children in poverty, but they may not have the same expectation for children who are physically impaired. A general assessment of teacher expectation may not be able to capture the specificity of the tasks and beliefs imbedded, thus limiting the scope of the validity of the study. (p. 29)

Current assessments of cultural and multicultural competencies, even those that include items about students with ability differences, are not adequate in assessing preservice teachers' intersectional competence.

### **Purpose Statement**

Despite the growth of studies on preparing teachers to teach an increasingly diverse student population, researchers have primarily relied on attitudinal measures to assess the impact of teacher preparation programs on preservice teacher's cultural competence. Recently, there have been efforts to create teacher efficacy and competency measures to determine preservice teachers' readiness to instruct diverse students. The efficacy and competency measures, for the most part, focus on disability separate from cultural diversity and were self-reported measures. Intersectionality can advance an understanding of the gap created by the lack of a comprehensive treatment of diversity in teacher preparation research. Intersectionality is a frame that explores the complexities of the interactions of markers of difference. It holds great potential as a concept for preservice teachers' understanding of diversity because it can inform collaborative efforts with diverse stakeholders and facilitate preservice teachers' understanding of diverse learners.

Intersectionality framing has potential for helping general and special education pre-service teachers understand their roles in relations to the wide, and often

interconnecting, diversity of the students and families they will work with. Young (2011a) explored the complexities in the development of professional identities within a collaborative context that involves special and general education teacher preparation coming together. Preservice teachers construct professional identities and need to collaborate with colleagues who may have developed disparate identities. Young (2011a) acknowledged that collaborative efforts may help general education preservice teachers to “combat ideological bifurcation about disability” but also warns “the realities of socialization and identity formation might counteract these positive pedagogic, practical, and ideological prospects” (p. 22). Waitoller and Kozleski (2013), however, referred to intersectionality, boundary practice, and cultural historical activity theory (CHAT) as potential frameworks to understand efforts to build partnerships between general and special education preservice teachers.

Although the demographics of teachers and preservice teachers continue to be predominately White and female (Aud et al., 2013; Ingersoll, Merrill & Stuckey, 2014; Kozleski et al., 2014) preservice teachers may also work with colleagues whose cultural background or gender differs from that of their own (Lee & Hemer-Patnode, 2010; Sleeter, 2001). A recent report from the Consortium for Policy Research in Education (Ingersoll et al., 2014) indicated that state and federal efforts to recruit diverse teachers have been successful and “minorities have entered teaching at higher rates than Whites in recent decades” (p.18). For example, Canning (1995) explored preservice teachers paired with Mexican and Black host teachers and discussed the intercultural exchange in these partnerships. Teachers from non-dominant cultures are more likely to be motivated by social justice issues than their White peers (Su, 1997). Although White novice teachers

are less likely to be interested in issues of equity than their non-White counterparts, when compared with veteran teachers newly entering teachers continue to be disproportionately placed in school contexts where equity concerns are salient (Kozleski et al., 2014, p. 121).

Even in a context where all colleagues are White, there is great diversity among White preservice teachers. Laughter (2011) noted that often in multicultural teacher education research “it seems every [White preservice teacher] grew up in a comfortably middle-class background and has always wanted to be a teacher” (p.48). He argued that there are other markers of identity, such as religion, class, gender, and geographical location, which intersect and influence the way White preservice teachers view teaching and learning. Regardless of the racial composition of a school’s faculty and staff, it is instructive to acknowledge one of the assumptions of intersectionality: “each category of differences has within group (as well as individual) diversity that influences the dynamics, as well as the outcomes of intervention” (Garcia & Ortiz, 2013, p.35). Intersectionality provides a lens for teachers to understand the experiences of diverse colleagues and partners, as well as help educators bring each other’s experiential knowledge base as an asset to collaborative efforts.

An understanding of intersectionality will also help teachers when working with students who experience the effects of multiple sociocultural markers of difference (Grant & Zwier, 2011). Despite some push back on the social justice agenda of teacher education (Villegas, 2007), the history of both special education and the education of students of color in the twentieth century has been largely driven by Civil Rights activism and have often intersected (Artiles, 2013). When preparing teacher candidates,

intersectionality helps to frame an understanding of how systems of privilege and oppression have developed, and how schools are implicated in these interlocking systems. Furthermore, it is well documented that the general education classroom is becoming increasingly diverse (Correa et al., 2014). General and special education preservice teachers will thus benefit from having a framing that will allow them to understand students and colleagues who have multiple markers of difference.

Teachers are expected to not only work with a diverse classroom, but also with diverse families and community members. Hollins and Guzman (2005) found in their review that White preservice teachers tended to feel uncomfortable working with families from non-dominant cultures. Cultural competence and responsiveness, however, is especially critical when collaborating with families of students with disabilities (Klinger & Harry, 2006). A family's attitude toward disabilities and toward its role in the child's education may be mediated through a cultural lens that differs from that of the service providers (Harry, Rueda, & Kalyanpur, 1999). Intersectionality framing could potentially enhance preservice teachers' competency and efficacy for working with diverse families.

### **Statement of the Problem**

Disabilities can no longer be thought of as separate from other diversities, nor should markers of diversity be treated through a unitary approach that privileges one marker of identity over others. When considering how teacher preparation programs equip future teachers to meet the needs of all learners, it is important to consider how a student population characterized by multiple diversities is best served in schools. The prevailing concern about diversity extends beyond "special" and "general" education as two distinct entities. It is critical to identify the most effective ways to prepare general

and special education teachers for their work in diverse and inclusive settings. The intent of the present study is to develop an instrument with acceptable standards of validity and reliability estimates, for measuring preservice teachers' understanding of intersectionality. In the current study, the researcher will draw from the literature on intersectionality and the research on preparation for inclusion to identify the indicators of a construct included in the development of the instrument. The instrument is intended to measure preservice teachers' intersectional competence, that is, their understanding of diversity and how students, families, and colleagues have multiple sociocultural markers that intersect in nuanced and unique ways. The instrument constructed in this study will provide an additional evaluative tool for teacher educators and researchers to assess the readiness of preservice teachers to work with diverse students and families.

In addition to addressing the need to evaluate preservice teachers' intersectional competence, this study contributes to the current dialogue, within and outside of education, concerning how to research intersectionality. By identifying the indicators of intersectional competence that the studies on intersectionality and special education reveal, involving experts from special education and general education in the validation of the indicators, and establishing the validity and reliability of an instrument that measures intersectional competence, the results of this study provide those who examine and research intersectionality an example of how to take intersectionality from a theoretical frame to empirical and practical applications.

### **Research Questions**

The research questions for this mixed methods study are organized by the two phases of the investigation. The research question for the qualitative phase was:

1. What are the indicators that best capture preservice teachers' understanding of the effects of intersecting sociocultural identities (i.e., intersectional competence) as ascertained from:
  - a synthesis of the preliminary indicators identified in the literature review and the focus group and cognitive interviews data;
  - consensus among panel experts, in both special and general education, to validate the indicators of the intersectional competence construct; and
  - consensus among panel experts to validate the items of a case-based measure of preservice teachers' intersectional competence?

The research question for the quantitative phase of the study was:

2. What are the validity and reliability estimates that are established for an instrument developed to measure general education and special education preservice teachers' intersectional competence?

### **Definition of Terms**

#### **Collaborative teacher education:**

Preservice program created by bringing together teacher preparation “for general and special education for the purpose of improving the quality of instruction for all students generally, and particularly for students who have disabilities” (Blanton & Pugach, 2011, p. 220).

**Competence:**

Deci and Ryan (2000) describe competence as the ability for people to take on roles where they can assume responsibility. This study enacts an “ability-development” (p. 227) approach toward competence.

**Cultural competence:**

A teacher’s ability to successfully teach students who identify with cultures other than their own. Liang and Zhang (2009) identified the following four indicators of cultural competence: (a) believing that all students can learn; (b) engaging in self-reflective and critical examinations when working with students of diverse backgrounds; (c) communicating high expectations; and (d) taking actions to challenge social inequalities.

**Disproportionality:**

The statistical over-representation or under-representation of a particular demographic group in special education programs when compared to the presence of this group in the overall student population (Sullivan & Artiles, 2011).

**Diversity:**

“Differences among groups of people and individuals based on ethnicity, race, socioeconomic status, gender, exceptionalities, language, religion, sexual orientation, and geographical area” (NCATE, 2008).

**Dominant culture:**

The established language, values, and social customs that are established as the norm for the society as a whole and by which other activities and social customs are compared (Houser, 1996; Kozleski et al., 2014).



**Efficacy/self-efficacy:**

Beliefs about one's ability to learn or perform effectively. According to Bandura (1977; 1997), these beliefs predict the extent to which a person will persist in order to achieve desired outcomes.

**Inclusive education:**

“...a global movement that emerged as a response to the exclusion of students who were viewed as different (e.g., students with disabilities, students of color, students from lower caste backgrounds, students from low socioeconomic backgrounds) by educational systems” (Waitoller & Artiles, 2013, p. 321).

**Intersectionality theory:**

A theoretical lens that examines how the numerous biological, social, and cultural categories such as gender, race, class, ability, and other aspects of identity interrelate on multiple, and often simultaneous dimensions, contributing to systematic social inequality (Collins, 1990; Crenshaw, 1989).

**Sociocultural consciousness**

An “understanding that people's ways of thinking, behaving, and being are deeply influenced by such factors as race/ ethnicity, social class, and language” (Villegas & Lucas, 2002, p. 22).

**Unitary approach:**

In research involving multiple markers of identity such as race, gender, and class, the unitary approach makes “emphasis on a single category of identity or difference or political tradition as the *most* relevant or *most* explanatory” (Hancock, 2007, p. 67).

## **CHAPTER II**

### **REVIEW OF THE LITERATURE**

In this chapter, the researcher provides a review of the research on teacher preparation for diversity and collaboration in inclusive settings. In the first section, the researcher reviews intersectionality theory and discusses how the theoretical lens lends itself to the problem addressed in this study: the need for a comprehensive, integrative way to measure preservice teachers' intersectional competence, that is, preservice teachers' ability to understand and respond to diversity that encompasses multiple markers of difference. Intersectionality theory functions as a critical feature of the conceptual framework grounding this investigation. Previous methodological and interdisciplinary approaches to researching intersectionality theory are carefully examined and the researcher includes a synthesis of how intersectionality theory has been applied to special education research. To conclude this section, the researcher discusses three potential indicators of intersectional competence that emerged from the literature on intersectionality and special education.

In the second section, the researcher reviews the extant studies on assessments of preservice teachers, focusing on three major categories: (a) assessments of collaborative skills, (b) assessments of preservice teachers' attitudes, beliefs, dispositions, and efficacy toward working with diverse populations, and (c) assessments of preservice teacher competencies with diverse students. For each of these three categories, the researcher explores how constructs identified in existing measures (e.g., attitudes toward inclusion, cultural competence, multicultural competence, and teaching for social justice) relate to

intersectional competence. As Gehlbach and Brinkworth (2011) explained, knowledge of the literature helps designers of instruments to “define their construct so as to situate it within, connect it to, and differentiate it from related concepts” (p. 2). The researcher will examine the “degree of overlap between” intersectional competence and “related, but distinct constructs” (p. 2).

In the final section, the researcher summarizes the indicators that emerge from the literature that may capture preservice teachers’ understanding of the effects of multiple markers of difference. The researcher concludes with a discussion about what has been executed in the field related to assessments designed to measure preservice teachers’ understanding of multiple markers of difference, what remains to be accomplished, and how the current investigation fits within the historical context of collaborative efforts to prepare general education and special education teachers to work with diverse learners.

### **Intersectionality Theory: The Framework and Its Application in Special Education Research**

Recently, there have been several calls to apply an intersectionality lens to research and practice in special education. In the Fall 2012 issue of *Multiple Voices for Ethnically Diverse Exceptional Learners*, the co-editors of the journal argued that more researchers of topics in special education should turn to intersectionality as an option to explore diversity, develop research designs, and create analytical frameworks that can help to explore how institutions produce and perpetuate social inequality (García, Ortiz, & Sorrels, 2012). García and Ortiz (2013) expanded on this initial call by identifying the assumptions behind intersectionality research and explicating the need for researcher reflexivity when conducting research in multicultural contexts. In the Fall 2013 issue of

the *Du Bois Review*, Artiles (2013) proposed that universities prepare “the next generation of scholars with an intersectional imagination” (p. 342) and argued that there is a need for more scholars to take “advantage of the potential of intersectionality” (p.342).

Artiles (2013) explained that there are studies that examine the intersection of disability with other categories of differences, even when not including intersectionality as the conceptual framing of the study. In this present review, however, only the studies that explicitly call on intersectionality theory in special education research are included. These include: a legal rejoinder (Natapoff, 1995); two literature reviews (Arms, Bickett, & Graf, 2008; Grant & Zwier, 2011), three studies that collected data using qualitative interviews (Connor, 2006; Connor, 2008; Ferri & Connor, 2010), and four conceptual/theoretical papers (Artiles, 2013; García & Ortiz, 2013; Grant & Zwier, 2011; McCall & Skrtic, 2009). Interestingly, the three qualitative studies each involved adult participants who reflected on their P-12 experiences in special education. These studies focused primarily on the intersecting identities of students with disabilities.

When examining the research on the intersection of disability with markers of difference such as race and ethnicity, Artiles (2013) critiqued both medical and sociocultural perspectives on disabilities. Artiles argued that researchers from both perspectives often bring together theoretical “premises from opposing paradigms” (p. 340) and goes on to describe “the need for strengthening theoretical clarity and its methodological implications” (p. 341). In Table 1, details about the empirical research and theoretical papers on intersectionality and special education are organized in chronological order. Notwithstanding the theoretical and methodological weaknesses of

Table 1

*Intersectionality and Special Education*

Author (year)	Purpose	Design/ methods	Context/ participants	Summary of findings
Natapoff (1995)	Legal rejoinder; counterpoint to a previous ruling (Parsons/Jordan position) that privileged special education over bilingual education.	Case built on then emerging writings about intersectionality (Crenshaw, 1989).	The population of interest is deaf students from Non-English speaking homes.	Bilingual education is as pedagogically necessary as special education.
Clarke (2003)	Qualitative study; described the schooling experiences of Black Deaf or hard-of-hearing adult males, relationship between participants' identities and their schooling experiences, and ways relationships effected their lives.	Dissertation: Qualitative interviews and narrative inquiry.	Six Black Deaf or hard-of-hearing adult male participants with different audiological hearing disabilities.	Eleven analytical themes emerged. When learning contexts were culturally responsive, participants reported enhanced experiences.
Connor (2006)	Phenomenological and exploratory study of the intersectionality of learning disability, race and class.	Single case study. Co-constructed data with participant. Six semi-structured, 1.5 hour interviews	Michael, a young adult at time of study; African American.	Michael described special education as a form of control and marginalization.
Arms, Bickett, and Graf (2008)	Literature review and content analysis of U.S. studies on gender and disability.	Organized studies into 3 major categories: referral and identification for services, school experiences, and outcomes.	Over 120 studies on gender and disabilities.	Lack of attention to girls in group of literature. argued for intersectionality in policy and practice; do not explain how.

Table 1

*Intersectionality and Special Education Continued*

Author (year)	Purpose	Design/ methods	Context/ participants	Summary of findings
Connor (2008)	Multiple accounts of students and their lived experiences at the intersection of race, social class and disability. In <i>Urban Narratives: Portraits in Progress</i> .	Qualitative interviews, narrative inquiry.	Eight participants. Non-White, ages 18-23, labeled learning disabled while in school.	Students of color are over-represented in special education but underrepresented in the research.
McCall and Skrtic (2009)	Theoretical paper examining disproportionality in the U.S. through the inter-sectional lens of Collins (2000) and policy work of Nancy Fraser.	Created a two-part policy meta-frame.	Examined special education policies at federal, state and local levels.	Used meta-frame to analyze institutional sources of problem and to anchor recommendations.
Ferri and Connor (2010)	Phenomenological perspective of five working class women of color who were identified as having learning disabilities while in school and who reflected on their lives inside and out of their school.	Qualitative portraits.	Five women, self-identified as African American, Dominican, and/or Puerto Rican. Ages 18-20.	The participants negotiated the stigma and limitations at the intersection of multiple markers of difference.
Grant and Zwier (2011)	Literature review and position paper in support of intersectionality as an analytical tool.	Review of studies that included three or more identity axes to investigate student outcomes.	In response to the National Association for Multicultural Education (NAME)'s call for the application of intersectionality.	Authors agreed with NAME's position and proposed that teacher preparation include intersectionality in research and practice.

Table 1

*Intersectionality and Special Education* Continued

Author (year)	Purpose	Design/ methods	Context/ participants	Summary of findings
Artiles (2013)	An invited paper for special, interdisciplinary issue of the <i>Du Bois Review</i> . Conceptual essay. The author elucidates gaps in the special education and disproportionality research.	Counterpointal and intersectional analysis of the racialization of disabilities.	Special issue covered trajectory of intersectionality research in several fields; this paper examined education research.	Concluded with five recommendations for the expansion of intersectionality analysis in special education research.
Garcia and Ortiz (2013)	Conceptual paper proposing intersectionality as a framework for transformative research in special education.	Organized a set of assumptions about intersectionality; examine the importance of researcher reflexivity.		Concluded with a list of recommendations for researchers based on the assumptions.

the extant literature on intersectionality in special education, this researcher highlights three patterns in the scholarship: (a) clear identification of sociocultural group categories and markers of difference; (b) an emphasis on the interlocking and simultaneous effects of multiple markers of difference; and (c) an emphasis on the systems of oppression and marginalization that occur at the intersection of disability with other markers of difference.

### **Identification of Sociocultural Categories and Markers of Difference**

In an early effort to categorize intersectionality research in women's studies, McCall (2005) described three approaches to the issue of complexity of categories within intersectionality research. The anticategorical complexity approach to intersectionality deconstructs analytical categories. Users of this approach argue that the rejection of group categorization, such as ethnic and racial groups, is necessary to overcome oppression and inequities (e.g., Fausto-Sterling 2000; McCall, 2005). The authors of the existing literature on intersectionality and special education have not applied an anticategorical approach to their analyses but instead have chosen to acknowledge existing categories to analyze the effects of intersecting identities. McCall (2005) described intercategorical (or categorical) complexity as an approach where researchers suspend critiquing categories and use the existing categorical markers to analyze inequality. Arms et al. (2008), Grant and Zwiier (2011), and García and Ortiz (2013) each applied the intercategorical approach toward markers of difference. The intracategorical complexity approach is one that simultaneously applies categories and holds a critical stance toward categories. Artiles (2013) explicitly used McCall's language in calling his approach toward the racialization of disability "intra-categorical" (p. 340). Though not



explicitly designated as such, the intracategorical complexity approach is the stance on group categories that is most often applied in the application of intersectionality theory to analyze special education (e.g., Connor, 2008; Ferri & Connor, 2008; McCall & Skrtic, 2009). For example, in the four sets of qualitative interviews, each treating the intersection categories with an intra-categorical approach, the participants were aware of their markers of differences (e.g., gender identification; pertaining to an ethnic minority group; having a special education label) and acknowledged the real life impact of those categories (e.g., having to be in a separate classroom than their peers). At the same time, the participants were critical of each of those categories' ability to capture the entirety of their experiences.

### **Emphasis on the Simultaneous Effects of Multiple Markers of Difference**

McCall and Skrtic (2009) identified Connor's (2006) case study as the first application of intersectionality in special education research. In an article that appeared in the *Journal of Law and Education*, however, Natapoff (1995) cited Crenshaw's (1989) intersectionality theory; the article appeared more than a decade prior to Connor's study. Natapoff (1995) applied an intersectionality lens to an analysis of the educational services provided to deaf children who came from non-English speaking homes. In her rejoinder to a previous article published in the same journal, Natapoff (1995) argued that the decision to privilege special education services over bilingual education neglected the special pedagogical consideration of students who simultaneously constitute multiple subgroups. The article that Natapoff critiqued concluded that deaf children from non-English speaking homes are not entitled to a bilingual education, but instead should participate in an individualized program, such as those provided in special education.

Natapoff, after considering the multiple identities of students at the intersection of deaf and bilingual identities, disagreed with the assumption that “deafness trumps linguistic origin as a technical, pedagogical matter” (p. 275) and critiqued the reductionist approach that “neatly separated and prioritized” such important aspects of complex identities. Similarly, Pugach and colleagues (2014) critiqued the tendency within collaboration discourse for educators to privilege special education identity markers over other categories of identities; namely researchers privilege the special education markers over other markers of difference and ignore the simultaneous effects of multiple markers of difference.

The critique that Natapoff (1995) provided about the reductionist ways in which practitioners and researchers have privileged special education categories over other markers of difference is a critique of what Hancock (2007) described as a “unitary approach” (p.67). In the unitary approach to markers of difference the investigator places “emphasis on a single category of identity or difference or political tradition as the *most* relevant or *most* explanatory” (p. 67). Those who call on intersectionality in special education research reject the unitary approach and apply an intersectional approach (Artiles, 2013). That is, researchers treat categories as if each “matter[s] equally” and the relationship between categories “is an open empirical question” (Hancock, 2007, p. 64).

### **Emphasis on Power Relations and the Marginalizing Effects of Markers of Difference**

Hancock (2007) described the intersectional approach to research as one that conceptualizes categories as having dynamic interactions between both individual and institutional or structural forces. Instead of levels of analyses that choose between

individual or institutional factors, intersectionality allows for analysis that considers individuals integrated within institutional contexts. Individuals belonging to specific and multiple group categories are examined as agents contending with numerous and interlocking institutionalized forces such as “racism, sexism, classism, ableism, heterosexism, nationalism, and linguistic, religious, and geographical discrimination” (Grant & Zwier, 2011, p. 181).

For decades, researchers and policy makers have identified, explored, and monitored the disproportionality of racial minorities, yet a review of the data shows that the problem persists. Although several scholars have pointed to the convergences that exist between the historical mistreatment and exclusion of racial and ethnic minorities and treatment of people with disabilities, scholars in psychology, education, and medicine “artificially maintain a divide between race and disability, enforcing troubling silences and invisibilities” (Artiles, 2013, p. 331). McCall and Skrtic (2009) have called the disproportionate representation of poor, racial, and ethnic minority students a “wicked policy problem” (p. 3) because it involves choosing one of numerous interpretations of the source of the problem. Artiles (2013) referred to disproportionality as a “‘double bind’ that further compounds the structural disadvantages that each group has historically endured” (p. 330). Artiles (2013) and McCall and Skrtic (2009) each found that the interplay between individual and structural forces have often been ignored in the special education scholarship, with a preference for a facile, unitary approach or answer to the problem of disproportionality. It is time, they argue, to go beyond the existing rhetoric about disproportionality, and to explore critical, coherent, and practical ways to tackle the

systems of educational privileges and inequities that occur at the intersection of disability with sociocultural markers such as race, class, linguistic background, and gender.

In regard to the role of teachers and teacher preparation, Grant and Zwier (2011) primarily conceptualized their analysis of intersectionality of multicultural education and asserted that intersectionality ought to be enacted in preservice teacher education.

Furthermore, when examining teacher preparation for collaboration, some scholars have tangentially referred to intersectionality theory as a framework that may facilitate collaborative teacher education programs (Waitoller & Artiles, 2013; Waitoller & Kozleski, 2013). “Preservice teacher education can challenge teachers’ ideologies that have negative effects on diverse students, such as individualism, meritocracy, colorblindness, and White privilege” (Grant & Zwier, 2011, p. 184). By creating a context in which teacher educators “can challenge” (Grant & Zwier, 2011, p. 184) racism, class discrimination, and other institutionalized power structures, preservice teachers will have the opportunity to reflect on how the intersection of multiple identity markers may give some individuals privileged status while marginalizing others. An intersectionality framework allows for an analysis that does not choose between individual and institutional considerations, but considers the dynamic relationship between these forces.

### **Intersectional Competence Indicators from Intersectionality and Special Education Literature**

The goal of the first section of this literature review is to define intersectional competence in relation to the literature on intersectionality in special education. The extant literature of scholars who incorporate intersectionality theory to special education

research is scarce but growing. In accordance to the best practices that have been delineated for scale and survey development (Gehlbach & Brinkworth, 2011; Simms, 2008), the process of designing an instrument to assess a construct (in the case of this study, intersectional competence) begins with a thorough review of the literature. The review of intersectionality and special education research yielded the following three indicators of intersectional competence: (a) the ability to clearly identify sociocultural group categories (e.g., Arms, Bickett, & Graf, 2008; Artiles, 2013) and markers of difference, such as the markers of diversity that are identified in the NCATE (2008) standards; (b) an emphasis on the interlocking and simultaneous effects of multiple markers of difference (e.g., Ferri & Connor, 2008; García & Ortiz, 2013; Natapoff, 2005); and (c) an understanding of the systems of oppression and marginalization (e.g., Connor, 2006; Grant & Zwier, 2011; McCall & Skrtic) that occur at the intersection of multiple markers of difference, with special attention to the intersection of disability with other markers of difference (Connor, 2008).

### **Assessing Preservice Teacher Understanding of Diversity**

In response to mounting pressure to improve accountability, trends in higher education assessment are moving toward identifying quality indicators that assess preservice teacher performance, “both written and observed,” contextualized in “classroom-based tasks” (Blanton, McCleskey, & Hernandez-Taylor, 2014, p. 138). Liu and Millman (2013) explored how these performance assessments influence the preparation of preservice candidates to work with diverse populations. Another argument for increased accountability for teaching preparation programs is based on concerns about “the continued disparities in academic achievement by students of color and students with

disabilities compared with their White peers” (McCall et al., 2014, p. 51). In addition to examining the possibilities of leveraging teacher preparation to close the persistent achievement gaps, there are scholars who also see the heightened focus on assessments in preservice teacher preparation as an opportunity to improve teacher education (Carroll, 2013; Jagla, 2013). Herein, the researcher summarizes the literature on assessments that are intended to measure preservice teachers’ readiness to work with diverse populations, including students with disabilities.

### **Assessments of Collaborative Skills**

Pugach, Blanton, and Correa (2011) provided an historical perspective on the efforts that institutions of higher education and teacher preparation programs have employed to bring about collaboration between special and general educators. The purpose of collaborative teacher education is to prepare all teachers to work with students with disabilities. As early as the 1970s, in response to the language in the authorization of Education for Handicapped Children Act (now IDEA), Congress allocated funds for professional development so that classroom teachers would be able to meet the needs of students with disabilities. The U. S. Department of Education also saw the need to address curricular changes in the preparation of teachers in higher education and initiated the Dean’s Project Grant that provided small grants to schools in order to facilitate that effort. Throughout the years, teacher preparation programs around the country have attempted different approaches - such as the formation of dual licensure programs, merged programs, and other structural reorganizations - to encourage collaboration between general education preservice and in-service teachers with other school professionals in order to meet the needs of students with disabilities (Blanton & Pugach,

2011; Pugach et al., 2014). Consequently, the federal government continues to provide teacher preparation programs with funds, such as the Office of Special Education Programs (OSEP) funded 325T grants that are used to facilitate collaboration to meet the needs of special education students.

**Assessing general education and special education preservice teachers.** In the *Handbook of Research on Special Education Teacher Preparation*, Pugach and colleagues (2014) conducted a comprehensive review of research published between 1997 and 2012 that examined general and special education preservice faculty efforts to prepare their teacher candidates to implement inclusive practices. One of the criteria set by the authors of the chapter was that the studies had to include “joint commitment and joint action” between special and general education preservice programs and participants (p. 155). The studies included were of program redesigns that ranged from partial, course-level redesign to full program restructuring. Pugach and colleagues (2014) excluded survey and attitudinal studies from their analysis. Sixteen of the thirty studies included in the chapter included some form of assessments of preservice teachers (Andrews, 2002; Arndt & Liles, 2010; Brown, Welch, Hill, & Cipko, 2008; Frey, Andres, McKeeman, & Lane, 2012; Geer & Hammill, 2007; Golder, Norwich & Bayliss, 2005; Goodnough, Osmand, Dibbon, Glassman, & Stevens, 2009; Griffin, Jones, & Kilgore, 2006; Kamens, 2007; Kamens & Casale-Giannola, 2004; Kurtts, Hibbard, & Levin, 2005; Jeffs & Banister, 2006; Maheady, Jabot, Rey, & Michelli-Pendl, 2007; McHatton & Daniel, 2008; Sobel, Iceman-Sands, & Basile, 2007; Young, 2011a). One of the findings of the review revealed that when the term “diverse” appeared within the studies about collaboration, it was typically to reference the diversity of participants’ academic or

departmental backgrounds or to reference the diverse learning needs of P-12 learners. Even when the researchers expressed interest in issues of equity in terms of race, culture and language, the discussion of a broader view of diversity remained in the peripheral of the papers (e.g., Arndt & Liles, 2010; Griffin et al., 2006).

McCall and colleagues (2014) reviewed research on special education candidate assessments. Of the 43 studies identified as assessing special education knowledge and skills, the authors identified 11 articles that addressed collaborative skills. Of the eleven studies described as addressing collaboration, McCall et al. (2014) categorized these studies into two groups, those that assessed professional collaboration competencies and those that included assessments of “family-teacher collaboration” (p. 58). Despite the different purposes of the two reviews, four of the eleven studies in the McCall et al. (2014) review (Bradley & Monda-Amaya, 2005; Griffin et al., 2006; McHatton & Daniel, 2008; McKenzie, 2009) were also included in the Pugach et al. (2014) chapter.

Although the McCall et al. (2014) review focused on assessment of special education candidates, across the three tables in which they organized the literature (organized respectively as studies of knowledge and skills, studies of dispositions, and studies of applied experiences) there are seventeen studies that included either dual certification and/or general education candidates in the sample. Of these 17 studies with special and general education candidates as participants, five studies resulted in special education participants that outperformed when compared to their general education peers (King-Sears, Carran, Dammann, & Arter, 2012; McHatton & Daniel, 2008; Miller et al., 2009; Shippen, Crites, Houchins, Ramsey, & Simon, 2005) or indicated that they had more training on special education knowledge and skills than their peers (Begeny &



Martens, 2006). Van Laarhoven, Munk, Lynch, Bosma, and Rouse (2007), were the only researchers whose study indicated that general education participants showed greater gains in special education knowledge and skills when compared to their special education counterparts. LePage, Nielson, and Fearn (2008) included both traditional special education candidates and dual credential candidates in a qualitative analysis that incorporated artifacts, surveys and interviews. They found that, over two years of course work and field experiences, the dually credentialed candidates were more likely to emphasize citizenship and various types of diversity when compared to the traditional special education candidates. Although the set of studies is few, these findings seem to point to special education preservice teachers having more content knowledge and skills related to special education and general education preservice teachers having more experiences with other categories of diversity.

**Types of collaborative assessments.** In total, between McCall et al. (2014) and Pugach et al. (2014) there were 24 unique studies about collaborative teacher education that included assessments of preservice teachers. The researchers of these studies used a variety of researcher-developed assessments and applied quantitative, qualitative or mixed methods approaches to the analysis of the data. The assessments ranged from one or more of the following: *pre- and post-test surveys* (Brown et al., 2008; Jeffs & Banister, 2006; Kurtts et al., 2005; Maheady et al., 2007; McHatton & Daniel, 2008; Murray & Curran, 2008; Sobel et al., 2007; Stang & Lyons, 2008; Welch & Brownell, 2002;), *qualitative analyses of preservice candidates responses* (Arndt & Liles, 2010; Gallagher, Vail, & Monda-Amaya, 2008; Geer & Hamill, 2007; Griffin et al., 2006; Kamens & Casale-Giannola, 2004; Stang & Lyons, 2008; Young, 2011a), *curricular probes to*

*assess content knowledge* (Hallam, Buell, and Ridgeley, 2003; Van Laarhoven et al., 2007), *field-based observation reports* (Frey et al., 2012; Golder et al., 2005; Goodnough et al., 2009; Kamens, 2007), *case based assessment* (Andrews, 2002), and *qualitative vignettes* (Bradley & Monda-Amaya, 2005).

For the purpose of identifying potential indicators of intersectional competence, the researcher closely examined eight studies about the assessment of preservice teachers' collaborative knowledge and skills. These studies about collaborative teacher preparation were selected for further review because the authors, to varying extent, considered diversity beyond special education categorization. Furthermore, in all eight of these studies, both general and special education preservice teachers were included in the sample. Two of the studies (Griffin et al., 2006; Kamens, 2007) appeared in both the McCall et al. (2014) and Pugach et al. (2014) reviews. Four studies appeared in Pugach and colleagues' (2014) handbook chapter (Andrews, 2002; Arndt & Liles, 2010; Sobel et al., 2007; Young 2011a). Two studies are from the McCall et al. (2014) review and addressed preservice teachers' collaboration with families (Hallam et al., 2003; Murray & Curran, 2008).

**Conceptualization of professional roles and responsibilities.** General and special education preservice teachers' capacity to co-construct and negotiate professional roles and responsibilities in an inclusive setting emerged throughout several studies about collaborative teacher education. Below, four studies in which preservice teachers described the process of defining their role within a collaborative context are examined specifically as they relate to working with a student population with diverse abilities.

Through the application of a case study approach, Kamens (2007) explored the experiences of two pairs of preservice teachers. Each pair consisted of one preservice teacher from general education and one from a dual-certification program. The preservice teaching pair co-taught with teams of collaborating cooperating teachers. Of the preservice teachers, three were female and one was male. Three of the student teachers were identified as “Caucasian” and one was “African American” (p. 157). Although one preservice pair consisted of a male and female pairing, it is not clear from the article whether the African American participant was male or female. The cooperating teachers were all female and White. Kamens (2007) did not include information about the faculty involved in the study in the article. The school in which the case study took place was described as a suburban elementary school with 15% of the students classified with disabilities. Kamens’ (2007) was one of only three articles about co-teaching that included information about participants’ race or cultural background (see also Arndt & Liles, 2010; Griffin et. al., 2006).

Data sources in Kamens’s (2007) investigation included researcher field notes, university supervisor notes and observation reports, student teacher journals, student teaching observation reports, cooperating teacher notes and feedback, and email communications among participants. Student teachers expressed what they found to be the benefits of having a partner to provide continual feedback during student teaching. They also discussed the challenges involved in negotiating roles and responsibilities in their observations of the cooperative teacher teams as well as in their descriptions of their own co-teaching efforts. The cooperative teachers expressed concerns that the structure of the co-teaching experience and shared workload may not be a realistic model of what

the preservice teachers may encounter in their careers. The student responses and researcher's analysis greatly emphasized the importance of compatible personalities. Overall, participants' perceptions of the co-student teaching structure on the students were positive.

Arndt and Liles (2010), a faculty team that consisted of a special education instructor and a social studies instructor, designed collaborative assignments focused on co-teaching in inclusive classrooms for two classes of preservice teachers. Each instructor taught a separate course, one a special education elementary course, the other a secondary social studies course. The two instructors provided individual class projects and cross-class projects on collaboration and co-teaching, as well combined their classes periodically to model co-teaching. Arndt and Liles reported that the 29 participants were "predominately White" (p. 17), with majority female special education preservice teachers and predominately male Social Studies preservice teachers.

Data were analyzed qualitatively through the examination of sources such as student reflections, class presentations, and focus groups. One key finding suggested that students were open to co-teaching as an effective method; however, the preservice teachers expressed concerns about their respective roles within collaborative teams. Arndt and Liles (2010) found that preservice teachers' lack of competence about the content of another field may lead them to have an oversimplified conception of co-teaching as simply two persons teaching together when convenient. The researchers shared the position that existing practices in preservice preparation reinforced limited constructs about disabilities and responsibility for instruction. They also reflected on

how the structure of their collaborative efforts may have unintentionally contributed to the preservice teachers' responses.

Griffin et al. (2006) sought to answer the question, what do special and general education interns prepared to collaborate with school professionals and families perceive as facilitators of and obstacles to collaboration when supporting children with disabilities in general education settings? The demographic information of all three groups of study participants were listed, in addition to the teaching arrangement in which they worked, (e.g., self-contained, inclusive, resource room). Griffin et al., however, did not include information about the student or family populations that the candidates were serving. The authors reported that the themes included in the course were collaboration, consultation, communication, problem solving, families, and diversity. The authors, however, did not expound on how the instructor addressed diversity in the course, and the concept of diversity does not reemerge in the findings or discussions of their analysis.

In identifying facilitators of collaboration, the findings indicated that a school climate supporting collaboration, family engagement, and colleagues' shared concerns for and expectations for students were all considered to promote collaboration. Challenges identified were power differentials between student teachers and school faculty, conflicting perceptions of roles and responsibilities, conflicting goals between colleagues and students' families, and lack of communication.

Young (2011a) explored how teacher candidates in a dual licensure program were socialized and formulated identities as either a general educator or a special educator. The study's participants were members of a combined credential program that lead to licensure in both elementary and special education. Twenty candidates participated in the

study, which included 18 women and two men, aged from 23 to 50. Of the women, 13 self-defined as European American, five as Asian American, and three as Latina. Several women self-defined as coming from multiethnic/racial backgrounds. Both men self-identified as Caucasian. Seventeen participants completed questionnaires and 18 participated in semi-structured interviews.

Findings indicated that societal, institutional, and personal influences were all factors that contributed to the professional socialization of the participants. At the end of a yearlong study, there were no reported changes in the special education teachers' desire to teach students with disabilities and only some candidates entering with a goal of being a general education teacher experienced some shift in their willingness to work with students with disabilities. Besides a statement in the discussion section about how markers such as students' race, ethnicity, language background, and income “unfortunately” (p. 21) may have influenced preservice teachers' decision to pursue education, there was no discussion of how the participants' sociocultural or linguistic backgrounds may have mediated the formation of their professional identity.

The assessments of collaborative studies often related to the preservice teachers', whether in general or special education programs, perceptions of their professional roles and responsibilities in relationship to students with disabilities. For example, Waitoller and Kozleski (2013) referred to intersectionality, boundary practice, and cultural historical activity theory (CHAT) as potential frameworks to understand efforts to build partnerships. Young (2011b) explored the challenges involved in the development of professional identities within a collaborative context that involved special and general education teacher preparation coming together. Young acknowledged that collaborative

efforts might help general education preservice teachers to “combat ideological bifurcation about disability...” but also warned “the realities of socialization and identity formation might counteract these positive pedagogic, practical, and ideological prospects” (p. 22).

Collaborative teacher preparation holds potential for providing a context where teacher educators and preservice teachers can delve into the complexities involved in teaching diverse student populations. Collaborative teaching, for example, enhances preservice teachers’ development as teachers, providing opportunities for them to articulate their thinking with colleagues and to receive feedback about pedagogical decision-making (Kamens, 2007). Moreover, collaborative teaching, whether modeled by faculty members or practiced in field experience, provides preservice teachers an opportunity to gain a greater understanding of course content because students get broader opportunities to engage with diverse perspectives across the teacher preparation programs (Arndt & Liles, 2010). Nevertheless within the collaboration studies, there are numerous occasions where issues of power and status perceptions emerged regarding the roles of the general and special education student teachers and the cooperating teachers (Arndt & Liles, 2010; Kamens, 2007). Beyond descriptive quantification of the ethnic composition of the preservice teachers and the number of males and females in the studies, there was no discussion about cultural factors or gender roles may have come into play, even when there were evident demographic divides among the collaborating participants in the study. For example, Arndt and Liles found some indicators that the perception was that the Social Studies general education preservice teachers (predominately male) had more clout than their elementary special education partners

(predominately female). Arndt and Liles did not acknowledge the gender disparity in their analysis and the perceived difference of status was framed as related to the content knowledge of the preservice teachers.

**Collaboration and cultural and linguistic considerations.** In addition to conceptualizing professional roles and responsibilities, there were two studies in which preservice teachers and teacher educators explored how structural forces, such as P-12 students' cultural and linguistic backgrounds, related to preservice teacher preparation. Andrews (2002) incorporated case-based instruction and an on-line component to student teaching in a course designed to better prepare teacher candidates for inclusive classrooms. Among the questions that guided the research, two focused on the use of online collaboration and the development of preservice teachers' confidence for working in diverse classrooms. The "diverse groups" (Andrews, 2002, p. 29) of students and the urban context of the school were of central concern in the development of the case and in the instrumentation of a survey about preservice teachers' perceived ability to adapt instruction. The researcher developed the case with a fifth-grade cooperating teacher whose classroom included several students with disabilities whose primary language was not English. Besides this general description of the fifth-grade students as English Language Learners with disabilities, there was little discussion about the background of the students.

The participants in the study were forty candidates in elementary, secondary, and a dual degree program. The candidates in the dual degree program were also referred to as special education preservice teachers. There were a total of twenty-six females and fourteen males, ranging in age from 19-40. The researcher included the preservice



teachers' level of experience with students with disabilities within the demographic information. Despite the diversity of the fifth-grade students being a key aspect of the design of the case and in the instrumentation of the survey, the author primarily referred to all participants by their special or general education program identification. No other details about the preservice teachers' background were presented in the article, even though demographic information from the candidates was collected during the first stage of the study. The researcher, however, indicated using the participants' information to create heterogeneous, cooperative groups that included "a mix of gender, ages, ethnicity, credentialing programs, and a range of student teaching and reported experiences with disabilities" (p. 14).

Sobel et al. (2007) described the organization efforts of a merged urban teacher education program. This study included surveys of 88 preservice teachers, results from a focus group of 12 faculty members, and a follow-up survey of 30 selected graduates of the program who were in their first year of teaching. The participants seemed to have a clearer concept of the role that diversity plays in their teacher preparation program. Concerning the greater philosophy and values of the university and efforts to merge the program, the faculty members reported how the school embraced diversity in schools and community and considered the "developmental, cultural, and linguistic differences among students" (p. 252) when making preparations to merge the programs.

Like most of the studies included in the collaboration review, however, this study included no demographic information about the faculty and student teacher participants. The preservice and in-service teacher respondents were categorized as either general or special education teachers. Respondents expressed positive perceptions about the

effectiveness of the program but suggested the need for more modeling of inclusive classroom practices within an urban, multicultural context. For example, although graduates found that the program enhanced their understanding of the cultural backgrounds represented within the community they taught in, four general and six special education teachers recommended a greater emphasis on bilingual teaching strategies.

**Collaboration with families.** McCall and colleagues (2014) identified three studies that examined collaboration between special educators and families (Fulfs & Harry, 2012; Murray & Curran, 2008; Murray & Mandell, 2004). Of these three studies, the reviewers identified the vignettes in the Fulfs and Harry (2012) article as also addressing in-service teachers' disposition toward diversity. The other two studies in this group were described as including "a high degree of input from family members of individuals with disabilities" (McCall et al., 2014, p. 58). Although Murray and Mandell (2004) asserted that the "diversity of community-based partners were critical factors" (p. 247) and the 26 participants "respected diversity among families" (p. 246), the authors do not expand on what is meant by "diversity." Murray and Curran (2008) were more explicit by what they meant by families' diversity using terms such as "diversity of disability experiences and ethnicity" and "cultural diversity" (p. 60).

Murray and Curran's (2008) study was the only one of the three identified by McCall et al. (2014) as addressing collaboration with families that had preservice participants. The assessments developed by Fulfs and Harry (2012) and Murray and Mandell (2004) were administered to graduate students who already worked in early childhood education. Murray and Curran (2008) paired six parents of children with

disabilities with groups of preservice teachers. There were a total of 26 students in the course, and the researchers included demographic information about the participants' ethnic and racial backgrounds. Students were asked to complete pre and post- course surveys of the researcher developed Learning Outcomes Survey. The survey consisted of 10 course objectives such as "Understand the complex interaction of social, emotional, and economics issues impacting families" (the only objective that all participants indicated improved ability upon completion of the course) and "Explain the influences of culture and diversity on families" (p. 61). The participants indicated that the course led to significant changes in students' perceived abilities to work with students with disabilities and their families. The researchers recommended that the project be replicated in "academic and community settings in order to evaluate ecological validity of these results" (p. 62).

In addition to the three studies the authors categorized as addressing collaborative skills with families, Hallam et al. (2003) conducted a national survey of 123 undergraduate early childhood programs and also found patterns in regards to how teacher preparation programs address collaboration with families. In the quantitative analysis, the researchers found that the trend was to assign teacher candidates to engage in field experiences and practicum in impoverished communities, but the curriculum tended to be lacking in terms of the content about engaging families living in poverty. The study also was critical of the "heavy reliance" (p.115) on reflections instead of performance-based assessments.

**Indicators of intersectional competence from collaborative studies.** The review of studies that included assessments of collaborative instructional knowledge and

skills yielded two potential indicators of intersectional competence: the capacity to co-construct and negotiate professional roles and responsibilities when teaching students with diverse abilities (e.g., Griffin et al., 2006; Kamens, 2007) and preservice teachers' ability to assess how cultural (Sobel et al., 2008; Murray & Curran, 2008;), linguistic (Andrews, 2002; Sobel et al., 2008) and economic factors (Hallam et al., 2003; Murray & Curran, 2008) may impact the experiences of students with disabilities and their families.

The privileging of special education identification over other markers of diversity in the extant collaborative studies seems to be at odds with intersectionality. For example, Frey et al. (2012) used the word "diverse" 13 times in their study, but the entire discussion on diversity was limited to students' ability and learning levels and included no demographic information pertaining to the faculty, preservice teachers, or the students' racial, cultural or linguistic backgrounds. Nonetheless, there were indications that some researchers and teacher educators were mindful of the intersecting identities of not only students in the school system (Sobel et al., 2007) but also the intersecting identities of the preservice teachers (Andrews, 2013; Murray & Curran, 2008).

### **Assessment of Attitudes, Beliefs, Dispositions and Efficacy**

McCall and colleagues (2014) identified 18 studies about candidate dispositions and categorized them as either attitudes about disability and inclusive education or attitudes about "diverse" students with disabilities (p. 58). The twelve studies on dispositions toward disabilities and inclusion were mostly researcher-developed attitudinal surveys; only four of these included participants that were general education preservice teachers in the samples (Carrol, Petroff, & Blumberg, 2009; Shippen et al., 2007; Silverman, 2007; Van Laarhoven et al., 2007;). The six studies about "diverse"

students with disabilities consisted of three quantitative surveys (Hallam et al., 2003; Kea, Trent, & Davis, 2002; McHatton & Daniel, 2008) and two concept maps (Correa, Hudson, & Hayes, 2004; Trent & Dixon, 2004). In addition to the studies identified in the McCall et al. (2014) review, other instruments have been developed, outside of special education, with the intent of assessing preservice teacher preparation for diversity that includes ability considerations. This researcher will closely examine the constructs tested in these instruments and identify the indicators that are compatible with the intersectional competence construct.

Pohan and Aguilar (2001) described the development of two belief scales designed to measure preservice teachers' beliefs about diversity. The scales were designed to assess preservice teachers' personal and professional beliefs about diversity. What distinguished this study from previous measures of multicultural education is the designers' broad and multifaceted definition of diversity:

Consistent with our view of multicultural education as broad and inclusive of many aspects of sociocultural diversity, we were most interested in measuring subjects' beliefs about a range of diversity issues. We found that race and/or ethnicity were most frequently associated with the concept of diversity and that these concepts have been assumed to be the central concerns for the field of multicultural education.... In essence, our approach to defining diversity seeks to be inclusive of historically marginalized socio- cultural groups; we do not ascribe to the narrower race or ethnic group approach. (p. 161)

The Personal Beliefs about Diversity Scale included 15 items related to race/ethnicity, gender, social class, sexual orientation, disabilities, language, and

immigration. These issues were contextualized to assess how study participants answer in alignment with their lived experiences. For example, questions about personal relationships, decisions about child-rearing, collective stereotypes as well as others (e.g., question 5, “it is not a good idea for same sex couples to adopt children”; question 9, “In general, White people place a higher value on education than do people of color”). The 25-item Professional Beliefs about Diversity Scale consisted of items measuring diversity with respect to race/ethnicity, gender, social class, sexual orientation, disabilities, language, and religion. The designers provided a summary of the pilot study and included results of the field-testing of the instrument. The participants in this scale responded according to their beliefs in the educational context. These contexts included: (a) instruction, (b) staffing, (c) segregation/integrations, (d) ability tracking, (e) curricular materials, (f) multicultural vis-à-vis homogenous education (e.g., question 1, “teachers should not be expected to adjust their preferred mode of instruction to accommodate the needs of all students”; question 20, “large numbers of students of color are improperly placed in special education by school personnel”; Pohan & Aguilar, 2001).

Both scales have response options that include a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). The higher the score, the more the participant was accepting of or open to a wide range of diversity issues (Pohan & Aguilar, 2001). The alpha coefficient for the Personal Beliefs Scale between pilot to field-testing ranged from .78 to .81 for both pre-test and post-test conditions. For the Professional Beliefs Scale, over the same stages, the alpha coefficients ranged from .78 to .90 (Pohan & Aguilar, 2001). Examining whether social desirability presented any possible threats to the validity of the study, the investigators assessed response bias of

participants. The developers also investigated whether there was response set bias due to sequence of the items of the scale. The content-related evidence of validity was assessed through the consensus of three faculty members and five graduate students, all with expertise and background in issues related to diversity (Pohan & Aguilar, 2001). Criterion-related evidence of validity was addressed throughout the development stages using a correlation analysis between the two scales as well as with age, gender, multicultural coursework, and cross-cultural experiences as variables. The Personal and Professional scales were positively correlated at the pilot stage ( $r = .72$ , and this increased ( $r = .77, p = 0.001$ ) for preservice teachers and decreased slightly for practicing teachers ( $r = .67, p = .001$ ), but still indicated a positive correlation. Some of the items on the two scales may overlap but not to the extent that they are interchangeable (Brown, 2004; Pohan & Aguilar, 2001). Beliefs about diversity varied little as a function of age, but gender was reported to have a higher impact on variability (Pohan & Aguilar, 2001).

The two scales that constitute the Personal and Professional Beliefs about Diversity Scales (PPBD, Pohan & Aguilar, 2001) were replicated in five published studies (Akiba, 2011; Dedeoglu & Lamme, 2011; Kyles & Olafsan, 2008; Middleton, 2002; Pohan, Ward, Kouzekanani, & Boatright, 2009; Torok & Aguilar, 2000) to measure changes in preservice teachers beliefs after a course or series of courses on multicultural education. Although the definition of diversity captured in the PPBD is broad, the changes in participants' beliefs were not necessarily consistent across these replicated studies. For example, Akiba (2011) reported that the analysis of improvement from pre-survey to post-survey and changes on the diversity scores showed that beliefs about diversity such as preservice teachers' perspectives on "people with disability did

not change as a result of one diversity course and field experiences provided in this study” (Akiba, 2011, p. 688). In other words, although the two scales that comprise the PPBD were intended to capture respondents’ multifaceted beliefs about diversity, Akiba was able to disaggregate data about changes in beliefs about diversity separate from disability concerns and acknowledged that disability was not a primary concern in her analysis.

Enterline and colleagues developed the Learning to Teach for Social Justice Beliefs Scale (LTSJ-B; Enterline, Cochran-Smith, Ludlow, & Mitescu, 2008). The teacher education program at Boston College, though not a collaborative teacher education program, has a stated goal of preparing teachers to work for and understand social justice. The creators of the LTSJ-B scale developed the survey to measure the beliefs and attitudes of preservice teachers to reflect principles of social justice, as framed by the designers. The following statement defined the principles guiding the design of the instrument:

The particular items that make up the LTSJ-B scale were chosen to reflect the idea of teaching as an agency for change and to encompass a number of key ideas about justice as both distribution of learning opportunities and outcomes and as recognition of the knowledge traditions and identities of multiple groups (Enterline et al., 2008, p. 276).

The developers of the LTSJ-B applied the Rasch Model, which proposes that beliefs and attitudes occur on a continuum and are not discrete or binary. The Rasch Model also allows for the researcher to account for and analyze change of a person’s attitudes and beliefs over time. The social justice indicators that the designers identified and tested



were: high expectations for all students, asset versus deficit-based view of historically disadvantaged students, disposition toward families and communities, critical thinking skills, and willingness to challenge meritocracy. Finally, teachers should be able to examine their core beliefs and attitudes toward others and be able to discuss issues pertaining to social inequality openly. The LTSJ-B was used as a programmatic wide survey that all preservice teachers completed at several stages of their program and then one, two, and three years after program completion. The designers of the instrument contend that the information from the LTSJ-B is used to better understand the effectiveness of the teacher education program to increase preservice teachers' awareness of and levels of social justice, that is, the ability to recognize and address issues of inequities that occur within the school system. The reliability and validity of this scale have been extensively tested and reported by its authors (Ludlow, Enterline, & Cochran-Smith, 2008). The Classical Test Theory (CTT) was used to measure reliability and validity using the entry and exit surveys completed by over 200 preservice teachers. The Cronbach's alpha was .77. An item analysis showed no negative point-biserial correlations. A factor analysis found the two clusters share a common factor addressing learning to teach for social justice but are distinguishable in that they address different aspects of social justice. The scale structure, which looked at the variability of the entrance and exit surveys separately and in relation to each other showed that the Scale Structure (entry compared with exit surveys) had a Pearson product moment correlation of .966.

Benton-Borghini and Chang (2012) provided a critical examination of candidates' diversity competence and developed a "rigorous and systematic assessment of candidates'

efficacy to teach diverse student populations" (p.29). One of the authors first created a competency measure (Benton-Borghgi, 2006) and used it to further develop and validate the instruments in this study, culturally Responsive Teaching Self-Efficacy Scale (CRTSE) and the Culturally Responsive Teaching Outcome Expectancy (CRTOE) Scale. Earlier scales, Teachers' Sense of Efficacy Scale (TSES) and Teachers' Sense of Inclusion Efficacy Scales (I-TSES), were adapted to include additional constructs related to diversity to provide measures "of the teachers' sense of efficacy to teach students with disabilities" (p. 36). The new instrument included a new construct that measures candidates' competence in Universal Design for Learning (UDL) and technology and (D-TSES). The third instrument included in this study, the Teachers' Sense of Diversity Efficacy Scale (D-TSES; Benton-Borghgi & Chang, 2010), was adapted from the I-TES and was intended to measure multicultural competence.

Benton-Borghgi and Chang (2012) administered three assessments to a sample of anonymously coded preservice and in-service teachers. The designers of the instrument asserted that the data collected during the period of six years was valid, but do not expound on how they determined the construct validity of the subscales. The reliability scores for preservice teachers on the TSES: .93 for Management, .91 for Instructional Strategies, and .89 for Engagement; on the I-TSES: .91 for Management, .90 for Instructional Strategies, .83 for Engagement, and .96 for Technology; and on the D-TSES: .76 for Management, .80 for Instructional Strategies, and .76 for Engagement, and .95 for Technology. Preservice teachers felt less efficacious to teach students with disabilities than their non-disabled peers and felt less efficacious to teach culturally diverse students. Benton-Borghgi and Chang indicated that the scores reflected the need

for improved diversity courses, a greater emphasis on technology, and more exposure to diversity concerns in field and clinical experiences. Although the three subscales included in the study were intended to measure preservice teachers' "sense of efficacy to teach every student" (p. 40), each scale considered disability separate from other markers of diversity.

### **Assessments of Competence in Working with Diverse Learners**

Daunic, Correa, and Reyes-Blanes (2004) described the development of a performance-based assessment of beginning teachers to evaluate 68 general and special education teacher preparation students for culturally diverse classrooms. As Blanton et al. (2014) discussed, despite recent support for performance assessments in teacher education programs, "only a few studies use performance assessments specifically with special education teachers" (p. 138). The study extended beyond assessing self-reported attitudes toward diversity and sought to compare general education beginning teachers with special education beginning teachers from four university teacher preparation programs. The purpose of the study was to determine whether there were differences between general education and special education teachers related to the level of preparation to work with culturally and linguistically diverse learners. Although the researchers found that the performance-based assessment across general and special education teachers was useful in attaining some information about teacher preparation, to evaluate the culturally responsive teaching (CRT) "competence of program graduates adequately, we need assessment systems that can examine CRT within the teaching and learning context and are applicable across a variety of classroom settings" (p. 116). The researchers went on to suggest that qualitative analyses may provide more information

about competence in areas such as cross-cultural communication and multicultural history, but stated that precise “systematic measurement requires rigorous and replicable scoring of criteria specific to cultural and linguistic diversity” (p.116).

Liang and Zhang (2011) described the development of an instrument intended to evaluate the cultural competence of preservice teachers. The authors examined categories of differences related to student learning on the nine content areas about diversity including culture, race, class, gender, sexuality, ability, language, identity, and religion; these categories were based upon the National Council for Accreditation of Teacher Education (NCATE) definition of diversity. The researchers identified four indicators of cultural competence from the literature (i.e., professional beliefs, self-reflections, high expectations and actions to ameliorate stereotyping and discrimination) and applied structural equation modeling to determine if the items of the instrument captured these indicators. In order to determine the reliability of the internal consistency of the instrument, the researchers piloted an earlier version of the instrument on 57 preservice teachers. An item analysis of the piloted version met acceptable alpha coefficient of .85. No other measures were conducted to determine the validity of the instrument. The formal administration of the assessment was given to 483 preservice candidates, 74.5 % who were Female, and 88.9% who were White. Furthermore, in their description of the development of an instrument for assessing cultural competence, Liang and Zhang (2009) expressed concerns that

... different forms of discrimination were experienced for different people in different contexts and for different reasons. Pre-service teachers may have high expectation for children in poverty, but they may not have the same expectations

for children who are physically impaired. A general assessment of teacher expectation may not be able to capture the specificity of the tasks and beliefs imbedded, thus limiting the scope of the validity of the study. (p. 29)

The overall goal of the second section of the literature review was to identify how existing measures of constructs related to intersectional competence (i.e., personal and professional beliefs, social justice beliefs, and cultural competence) may inform the development and design of a new measure. The studies presented in this section either described the development of multiple and distinct measures to account for candidates' attitudes toward diverse students (Benton-Borghgi & Chang, 2012; Pohan & Aguilar, 2001) or single instruments developed to assess preservice teachers' sense of social justice (Enterline et al., 2008) and cultural competence (Daunic et al., 2004; Liang & Zhang, 2009). There were three indicators that were similar across the conceptualization of the different preservice teacher assessments. First personal and professional beliefs about diversity are of importance and often measured in teacher preparation programs (McCall et al., 2014). Personal and professional beliefs are distinct, but interrelated with one another (Benton-Borghgi & Chang, 2012; Pohan & Aguilar, 2001) and may change in response to course work and field experiences (Akiba, 2011; Dedeoglu & Lamme, 2009; Middleton, 2002; Pohan et al. 2009; Torok & Aguilar, 2000). Second, when working with diverse populations, educators with strong competence to work with diverse learners demonstrate evidence of high expectations for all students (Enterline et al., 2008; Liang & Zhang, 2009; McCall et al., 2014). Third, educators must see themselves as change agents able to take action to ameliorate social inequities (Enterline et al., 2008; Liang & Zhang, 2009).

### **Summary: Indicators of Intersectional Competence**

In summary, the first substantive step toward the development of an instrument that captures a construct is to begin with a thorough literature review. In the first section of the literature review, the researcher reviewed the extant literature on intersectionality and special education and situated the theoretical underpinnings of intersectional competence. The second section of the literature review focused on existing assessments and related concepts to intersectional competence.

Special education and general education teachers are increasingly coming together in preservice teacher preparation programs. Studies about collaborative teacher preparation programs often include both special and general education participants. The collaborative studies and the assessments of disposition toward inclusion and disability tended to privilege special education and ability differences. On the other hand, measures of multicultural and cultural competence privileged “race and/or ethnicity” (Pohan & Aguilar, 2002, p. 161). Consequently, the second section of the literature review establishes that although existing assessment measures are in place, there is a continued need for an assessment that measures preservice teachers’ ability to understand and respond to multiple markers of difference.

The researcher of this investigation recognizes the importance of addressing preservice teachers’ personal beliefs and perceived competence with intersectionality in the development of an assessment instrument. The self-reported responses of many of the quantitative measures are a serious limitation to this group of studies (Hallam et al., 2003; Liang and Zhang, 2011). As McAllister and Irvine (2000) concluded, “studies using self-report instruments or interviews, participants may overrate their multicultural

competencies or misrepresent their attitudes” (p. 12). In addition to the self-reports, the researcher will also seek to design a subset of performance-based indicators that evaluate preservice teachers’ intersectional competence.

Based on the review of the extant literature on intersectionality in special education and the research on the assessment of preservice teachers’ competence with diversity, eight potential indicators of intersectional competence emerged:

- the ability to clearly identify sociocultural group categories and markers of difference;
- an understanding of the interlocking and simultaneous effects of multiple markers of difference;
- an understanding of the systems of oppression and marginalization that occur at the intersection of multiple markers of difference;
- the capacity to co-construct and negotiate professional roles and responsibilities when teaching students with diverse abilities;
- the ability to assess how structural forces such as cultural, linguistic, and economic factors have impacted the placement and experiences of students with disabilities and their families;
- personal and professional beliefs about diversity are distinct, but interrelated with one other; each is susceptible to change;
- the idea of teaching as agency for social change; and
- evidence of high expectations for all students.

## **CHAPTER III**

### **METHODS**

In this chapter, the researcher provides a review of the methods used to examine the research questions for this study. This chapter begins with a review of the research questions, followed by a rationale for the design of the study. A mixed-methods sequential exploratory design was applied to create an instrument that captures preservice teachers' intersectional competence. The instrument includes two subsets of items. Subset A is a survey designed for preservice teachers to self-report their intersectional competence and Subset B consists of items of a case-based measure of preservice teachers' intersectional competence. The mixed methods design of this study involved two phases -- the first phase, qualitative, and the second quantitative. The information about the participants in the study, data collection, and data analyses, are each organized by the two phases of the study. The chapter concludes with a description of the integrity procedures that were employed to enhance the rigor, trustworthiness, and the validity of the study.

#### **Research Questions**

The literature reviewed in the previous chapter revealed eight possible indicators of the intersectional competence construct. Despite the growth of studies on preparing teachers to teach a growingly diverse student population, researchers have primarily relied on attitudinal measures to assess the impact of teacher preparation programs on preservice teachers' cultural competence. Recently, there have been efforts to create teacher efficacy and competency measures to determine preservice teachers' readiness to



instruct diverse students. The beliefs, efficacy, and competency measures, for the most part, have focused on disability separate from cultural diversity and are mostly assessments that involve self-reported measures. Therefore, this study seeks to determine if an instrument can be developed that adequately captures preservice teachers' intersectional competence.

The research questions for this study were:

1. What are the indicators that best capture preservice teachers' understanding of the effects of intersecting sociocultural identities (i.e., intersectional competence) as ascertained from:
  - a synthesis of the preliminary indicators identified in the literature review and the focus group and cognitive interviews data;
  - consensus among panel experts, in both special and general education, to validate the indicators of the intersectional competence construct; and
  - consensus among panel experts to validate the items of a case-based measure of preservice teachers' intersectional competence?

The research question for the quantitative phase of the study was:

2. What are the validity and reliability estimates that are established for an instrument developed to measure general education and special education preservice teachers' intersectional competence?

### **Research Design**

Mixed methods research is a design in which the researcher combines aspects of both qualitative and quantitative approaches (e.g., extrapolation of qualitative and quantitative assumptions, data collection, analyses, and interpretive techniques) for the

“purpose of breadth and depth of understanding and corroboration” (Johnson, Onwuegbuzie, & Turner, 2007, p. 123). Sequential mixed methods are commonly applied in the development and testing of a new instrument (Creswell, 2003). Researchers who apply sequential mixed methods implement their investigation in “two distinct phases, with the collection and analysis of one type of data occurring after the collection and analysis of the other type” (Creswell & Clark, 2007, p. 66) and typically give equal priority to the data analysis of both phases of the study. Sequential mixed methods that begin with qualitative methods have been described as sequential exploratory strategy, in contrast to an explanatory strategy, in which the qualitative is collected first (e.g., using a small focus group to create instrumentation) followed by the application of quantitative methods (e.g., collecting quantitative data informed by the focus group data). Intersectionality was the theoretical perspective that drove the design and data analysis within this sequential exploratory mixed methods study.

### **Mixed Methods and Intersectionality Research**

There are several examples of the variety of methodological tools employed to research intersectionality. Those who have studied intersectionality have done so using a range of qualitative and quantitative methods. Choo and Feree (2010) reviewed numerous examples of how sociologists use qualitative methods to study intersectionality and inequalities. Examples of quantitative methodologies in intersectionality research are Stiratt and colleagues’ (2008) application of hierarchical class analysis (HICLAS) and Steinbugler and Dias’s (2006) analysis of quantitative survey data about affirmative action. Bowleg (2008) presented critiques on quantitative, qualitative and mixed methods to studying intersectionality. She identified the contradiction between the

assumptions behind these analytical approaches and the premise in intersectionality that social identities and inequality are interdependent and not mutually exclusive. Bowleg explored ways to develop questions to measure intersectionality, analyze data and interpret findings and cautioned researchers to be cognizant of the assumptions behind the data collection and analytical tools applied. Despite the challenges of researching intersectionality, Bowleg stated “interpretation becomes one of the most substantial tools in the intersectionality researcher’s methodological toolbox” (p. 312). Consequently, researcher reflexivity will play a substantive factor in the procedures of this mixed methods study.

### **Researcher Reflexivity**

A researcher’s experiences and disposition, regardless of ontological and epistemological orientation, will influence the research process. Kuhn (1962), Latour (1993) and Sayer (1992) exposed the social and discursive mediation inherent in the practice of science. Kuhn’s description of paradigms initially revealed what many of the member of the natural science community found to be the uncomfortable notion that scientists are not purely objective. Latour and Sayer also addressed the scientific community, including those involved in the social sciences, by deeming pure objectivity as a naïve value of scientific activities. Furthermore, Haraway’s (1988) writings on situated knowledge and objectivity are pertinent to this study, because although on one hand the researcher accepts and values empiricism, on the other hand, the researcher acknowledges the effects of socially constructed conceptions of identity markers (e.g., race, gender, social class) on knowledge-based discourse. Each of these scholars who examined the history of science caution members and students of the scientific

community to take heed of positivistic claims about objective truth and consider all knowledge as the product of social activity.

Because the communication of scientific findings is both discursively and socially mediated, a researcher's disposition will inevitably impact how the researcher approaches the scientific process, interprets the outcome of both the qualitative and quantitative phases of the study (Haraway, 1988; Sayer, 1992), as well as the ways that the findings are reported. Ravitch and Riggans (2012) argued that the researcher's initial "hunches" (p. 148) are an important aspect of building a conceptual framework and design of a study. Traditionally, in qualitative research, "the researcher is the primary instrument for data collection and analysis" (Merriam, 2002, p.5). Rather than seeking to become a neutral-objective person, as positivist researchers aspire to be, proponents of qualitative research relish the assets that the researcher's subjectivities bring to a project. Haraway (1988), however, contended that all knowledge is local and situated, including quantitative data analysis and that objectivity "turns out to be about particular and specific embodiment and definitely not about the false vision promising transcendence of all limits and responsibility" (p. 583). Moreover, denying that there is any subjectivity in the initial framing of the research question or act of research may, in practice, blind the researcher to a plausible rival hypothesis that may explain a finding (Kuhn, 1962, Rindskopf, 2000). Haraway (1988) argued that the more explicit investigators are in examining and divulging their positionality, the more objective their findings will be.

Within special education, there is a subset of scholars who have encouraged researcher reflexivity and have called on researchers to critique their subjectivities. Harry (1996) considered how racial and cultural identities impact researchers, and has

argued that while culture may serve as a starting point in examining identity, various elements of the “micro cultures” that a researcher belongs to may result in factors that influence decision making about the research process. Arzubiaga et al. (2008) rejected the legacy of “culture-blindness” (p. 311) in special education research and proposed a research approach that acknowledges research as “situated cultural practice” (p. 312). In their descriptions of the assumptions behind intersectionality framing in research, García and Ortiz (2013) placed great importance on the value of researcher reflexivity when conducting research in multicultural contexts.

In order to actively explore subjectivities and to “manage it--to preclude it from being unwittingly burdensome” (Peshkin, 1988, p. 28) the researcher of the current investigation maintained a reflective journal throughout both phases of the study. In light of the mixed method design of the study, it was critical for the researcher to be transparent about the discursive and culturally mediated process involved in the collection and interpretation of the data. Ortlipp (2008) encouraged researchers to use exploratory and reflective journal writing to gain a sense of the growing and changing understanding of the “role as researcher, interviewer, and interpreter of the data generated” (p. 703). Rubin and Rubin (2011) similarly suggested that the interviewer keep “a separate notebook, almost a diary, on your project” (p. 68) to monitor the emotional costs of engaging in interviews and to increase transparency within the research process.

### **Phases of Instrument Development and Validation**

Those who have attempted to synthesize the various stages of survey design in writing, even when explicitly applying mixed method designs in the development of a

survey instrument (e.g., Onwuegbuzie, Bustamante, & Nelson, 2010), have often started with quantitative analysis and pilot studies. Gehlbach and Brinkworth (2011) proposed a six-step process for enhancing the validity of survey scales that first includes collection and analysis of qualitative data and then moves on to quantitative analysis. Although the authors of this six-step approach do not call their sequence a mixed method design, they acknowledge that the process:

... (a) uses a broader range of techniques, (b) encourages scholars to be more collaborative with other researchers and with potential respondents during item development, and (c) increases the emphasis on validity early in the process should ultimately produce more efficient, valid scales while requiring fewer pilot tests. (Gehlbach & Brinkworth, 2011, p. 381)

In the present study, the researcher began by emphasizing the theoretical and qualitative basis for validating the instrument by engaging a focus group, consulting experts, and engaging in the practice of “cognitive pre-testing” (p. 5) before conducting a pilot study and applying quantitative analysis. Table 2 summarizes the study phases, sources of validity, participant details, and the products produced during each stage.

Table 2

*Summary of Data Collection Phases*

Phase	Sources of Validity Evidence	Participants	Product and Analysis	Date Completed
Qualitative phase: Theory-based evidence	Literature review	Researcher	List of preliminary indicators	Summer - Fall 2014
	Focus groups	Preservice teachers (12 organized in three focus groups) and a research assistant.	Venn diagram illustrating degree of overlap between researcher's construct and that of existing measures Transcription and coding of interviews. Alignment between the academic conceptualization of the construct and how the population of interest understands the construct	April 2015
	Initial item development	Researcher	Items of draft 1; Instructions for Expert Panel Reviews	June 2015
	Expert review of the preliminary items	Panel of six experts	Items of draft 2; Coding of responses	Sept. 2015
	Cognitive pre-testing interviews	Twenty preservice teachers	Audio recordings of interview. Third version of ICM	Nov. 2015
Quantitative phase: Empirical evidence	Revisit Expert Panel	Researcher	Analyze their responses to draft items. Content validity statistics	Dec. 2015
	A pilot test	Preservice teachers (107) Research Assistant	Revised scoring guide; Pilot version of the ICM	Dec. 2015 - Jan. 2016

*Note:* ICM – Intersectional Competence Measure.

### **Qualitative Phase: Theory-Based Evidence**

Qualitative research is interested in the way in which the world is understood, experienced or constructed by people's lives, behavior, and interactions. The qualitative researcher typically asks “what” and “how” questions (see Appendix A in Bogdan & Biklen, 2007). The two primary objectives of the qualitative data collection were: (a) for the designer of survey and instrument to understand how potential participants think and talk about the central construct in their own words, and (b) for the survey designer to probe participants to see whether the participants agree with the indicators that the researcher identified in the literature.

**Role of the researcher.** In qualitative research, “the researcher is the primary instrument for data collection and analysis” (Merriam, 2002, p.5) and often acknowledges subjectivities and possible biases. The researcher of this study is currently a full-time, fifth-year doctoral candidate and adjunct lecturer at Florida International University (FIU). The researcher is originally from Miami, FL with parents and siblings who are from the Dominican Republic. She self-identifies as Afro-Latina of Dominican descent. Since 2012, the researcher has taught an introductory course titled “Teaching Exceptional Students in Inclusive Settings” and recruited four of her former students to participate in the focus groups. She recruited five focus group participants from sections of the same course taught by other faculty at FIU. The researcher advises a student organization that is comprised, in part, of preservice teachers and recruited three participants of the focus group sessions from the members of that organization. During the focus group sessions, the researcher primarily took field notes and managed the audio recordings. There were



several instances during each focus group session where the researcher followed up with questions or a request for the clarification of participant's responses.

**Participants.** In addition to the researcher, there were two distinct groups of preservice teacher participants, a research assistant, and one panel of experts who participated in the qualitative stage of the study. The first group of 12 preservice teacher participants were divided into three focus groups. The preservice teachers were recruited during the spring semester of 2015. Although the majority of U.S. preservice teachers are White women (Aud et al., 2013; Ingersoll et al., 2014; Kozleski et al., 2014), given the intersectional competence construct, the researcher sought to recruit participants from diverse racial, ethnic, and linguistic backgrounds to inform the development of the ICM. The researcher visited the recruited participants' classes and, in addition to considering their majors, also selected participants based on what she perceived their racial or ethnic identities might be. Of the 42 potential recruits who initially showed interest in participating in the focus groups, the researcher selected six preservice teachers who were general education majors (specifically, Elementary and Early Childhood) and six who were Exceptional Student Education majors (i.e., special education majors). A summary of the twelve focus group participants' self-identified demographic information is presented in Table 3.

Table 3

*Summary of Demographics of Focus Group Participants (n=12)*

Demographics	<i>n</i>
Gender	
Male	1
Female	11
Age	
18-25 years	10
26-49 years	2
Race/Ethnicity	
Asian	2
Black or African American	2
Hispanic or Latino	6
White	2
Primary Language Spoken in Childhood Home	
English	6
Spanish	5
Urdu	1
College Major	
Exceptional Student Education	6
Early Childhood Education	1
Elementary Education	5
Courses taken that included SWD in syllabus	
1 – 2	5
3 – 4	2
5 or more	5
Courses taken that included CLD in syllabus	
1 – 2	1
3 – 4	4
5 or more	7
Disclosed Having a Disability	
Yes	2
Disclosed Being in a Gifted or Talented Program During P-12 Schooling	
Yes	5

*Note:* SWD – students with disabilities. CLD – cultural and linguistic diversity

The second set of preservice teachers included 20 participants who each engaged in individual cognitive pre-testing interviews with the researcher. The preservice teachers were recruited to participate in the cognitive interviews in the Fall of 2015. The participants were recruited from two separate sections of EEX 3070 Teaching Exceptional Children in Inclusive Settings, as well as from a course taught by the research assistant, MAE 4310 Content and Methods of Teaching Elementary Mathematics. Creswell (2007) indicated that “criterion sampling works well when all individuals studied represent people who have experienced the phenomenon” (p. 128). Thus, in the development of the instrument items for Subsets A and B, the researcher applied the criterion sampling technique to select participants who are enrolled in a teacher preparation program that prepares preservice teachers to work with diverse learners. At the conclusion of each cognitive interview, the participants were asked to provide demographic information (see the questionnaire in Appendix B). Table 4 includes a summary of the demographic information provided by all of the participants.

Table 4

*Cognitive Interview Participants Demographic Information (n=20)*

Demographics	<i>n</i>
Gender	
Male	4
Female	15
Undisclosed	1
Age	
18-25 years	18
26-49 years	2
Race/Ethnicity	
Asian	0
Black or African American	2
Hispanic/Latino	15

Table 4

*Cognitive Interview Participants Demographic Information (n=20) Continued*

Demographics	<i>n</i>
Mixed Race Hispanic/Latino	1
White Hispanic/Latino	8
White	3
Primary Language Spoken in Childhood Home	
English	9*
French	1*
Spanish	10
Serbian	1
College Major	
Early Childhood Education	3
Elementary Education	9
English Education	2
Special Education/Exceptional Student Education	6
Courses taken that included SWD in syllabus	
1 – 2	16
3 – 4	3
5 or more	1
Courses taken that included CLD in syllabus	
1 – 2	14
3 – 4	6
Disclosed Having a Disability	
Yes	1

*Note:* SWD – students with disabilities. CLD – cultural and linguistic diversity. The asterisk (\*) indicates instances where participant selected more than one response.

**Research assistant.** The research assistant is a current faculty member who recently graduated with her doctorate from the then College of Education at FIU. She is a 32-year old self-identified Black woman of Haitian descent who has a background in qualitative methods. The researcher has known the research assistant for 20 years and was able to secure her service on a voluntary basis. The research assistant facilitated the discussions during the three focus group sessions, reviewed and gave feedback on the

instructions for the expert review panel, and facilitated the recruitment of preservice participants. Three of the participants of the focus group sessions had previously been the research assistant's students.

*Expert panel members.* A panel of six experts reviewed the preliminary indicators and the first draft of the instrument items. To recruit external experts, in May of 2015 the researcher contacted 10 scholars who are knowledgeable about intersectionality in special education (Alfredo Artiles, Elizabeth Kozleski, Zachary McCall, and Federico Waitoller), cultural competence (Wanda Blanchett, Donna Ford, Robert Rueda, and Ana Maria Villegas) and collaborative teacher education (Vivian Correa and Marleen Pugach) to evaluate the items via e-mail communications. When describing the process of recruiting participants for qualitative interviews, Rubin and Rubin (2011) suggest that researchers choose participants who have relevant knowledge and experience as related to the researcher's questions, who can present a variety of views and who are willing to speak with the researcher. In selecting knowledgeable experts from the onset, the researcher not only saves time, but also is better able to get deeper and more nuanced answers to the research topic.

Rubin and Rubin (2011) suggest the selection of participants who have varying background experiences and who will provide balanced responses "including alternative points of view and a range of perspectives" (p. 62). Since an understanding of sociocultural markers and the effects of multiple markers of difference were identified as possible indicators of intersectional competence, the researcher sought to establish that each group of participants, including the panel of experts, had demographic diversity as indicated by self-reported gender, ethnic, racial, linguistic, class, and academic diversity.

The researcher looked through the literature presented in Chapter 2, as well as information and images from scholars' institutional web sites to recruit a diverse panel. More importantly, the 10 potential expert panel members were recruited because of their demonstrated expertise in at least two of the following areas: preparing teachers to respond to the needs of diverse learners; collaboration between special and general education teacher education; and intersectionality in special education.

Of the 10 potential expert panel members contacted via e-mail, nine agreed to participate in the study. A total of seven provided feedback on the ICM, six of whom were selected to be expert panel members because they completed the panel review per the instructions given. Of the six final expert panel members, three were male and three were female. Four are senior faculty, while two are junior faculty. Three work within special education and three within general education. Two authored articles regarding cultural competencies, three regarding collaborative teacher preparation, and two about intersectionality in special education. Four are senior faculty, while two are junior faculty. Unlike the preservice teachers, the researcher did not ask members to disclose their demographic information, but was able to ascertain that the panel was comprised of diverse participants due to personal conversations that the researcher had with the participants prior to the study (with the exception of two of the experts who were male).

**Qualitative data collection and analyses.** During the qualitative phase of the study, there were four stages of data collection and qualitative analyses. Below is the description of the stages within the qualitative phases in the order that they took place.

***Comparisons of preliminary indicator with existing measures.*** In reviewing the literature, the researcher not only identified preliminary indicators for the intersectional

competence construct but also identified existing instruments that had been previously validated to measure comparable constructs. Four existing instruments that measured indicators similar to the construct of intersectional competence, and included at least one item per measure about individuals with disabilities, were identified: Learning to Teach for Social Justice Beliefs Scale (Enterline et al., 2008), an untitled measure of pre-service teachers' cultural competence (Liang & Zhang, 2009), Personal Beliefs about Diversity Scale, and the Professional Beliefs about Diversity Scale (Pohan & Aguilar, 2001).

*Focus groups.* Having identified eight possible indicators of intersectionality competence from the literature, the researcher began the process of developing the instrument by following the sequence suggested by Gelbrech and Brinkworth (2011), that is, conducting focus groups. The focus group sessions engaged multiple participants at the same time with the purpose of data gathering through in-depth discussions and through the observation of participants during the session. Focus groups have been reported to be especially helpful in culturally diverse situations (Krueger, 1994). As suggested by Krueger and Casey (2000), a focus group session should last no more than an hour to two, involve enough participants to generate rich discussion, and with a moderator who facilitates the group discussion. A research assistant was recruited to participate in order to assist the researcher with technical aspects of the session. Furthermore, Krueger and Casey suggested that there must be some level of homogeneity in the participants of a focus group. In this study, there will three focus groups: four special education majors participated in focus group A, two special education and two general education majors participated in focus group B, and four general education majors participated in focus group C.

The focus group data were collected from the population of interest -- preservice general and special education teachers -- in order for the researcher “to ascertain whether [her] newly refined conceptualization of the construct matches the way [her] prospective respondents think about it” (p. 3). Before the focus group sessions, the researcher structured 10 open-ended discussion questions about the preliminary indicators of intersectional competence (see Appendix A). In the first round of data collection, the researcher listened to participants’ responses to identify if there were any discrepancies between what the literature conveyed about intersectional competence and what the preservice teachers’ conceptualization of the construct were. More specifically, the purpose of the focus group sessions was to determine how the instrument’s intended audience (i.e., preservice teachers) understood and talked about intersectionality and diversity. In addition to the discussion questions developed, probing techniques were used by the research assistant to keep the discussions on target (Rubin & Rubin, 2011). These formulaic phrases were useful in getting more details (e.g., “can you say more about that?”), enhancing credibility (e.g., “what is your personal experience with...?”), reveal slant or biases (e.g., “what is your opinion on...?”), or to clarify (e.g., “how many people”). The researcher audiotaped the sessions as well as took field notes during the discussions. At the conclusion of each session, the researcher asked the participants to fill out a brief questionnaire about their demographic and academic background information (see Appendix B).

In order to identify patterns in participants’ understanding of intersectionality and in the language that preservice teachers used to describe diversity, the researcher began the analysis by transcribing all focus group audio recordings and inserting comments



from the field notes into the transcribed materials. Each participant quote was placed on a separate line with the participant and the focus group number labeled (e.g., for question four, a comment from participant 3 in group A was assigned the alphanumeric symbol 4.A3). The data were organized on Excel workbooks with each group receiving a separate workbook. Within the workbooks, the researcher used one worksheet per question/preliminary indicator. The focus group responses were organized into five columns, (first column for participants' labels, second for the participants' quotes, third for order of response, fourth for researcher field notes, and the final column for coding). The coding columns were completed after common themes across the entries for each question/indicator were identified.

In developing items for the instrument, the researcher synthesized the data gathered from the focus group session respondents with the preliminary indicators of intersectional competence that emerged from the literature (i.e., studies about intersectionality and special education, preservice teacher assessments within collaborative teacher preparation, and existing measures of beliefs about diversity, social justice, and cultural competence). The goal of the synthesis was to facilitate the creation of items that used the language of the respondents and were complementary to the existing literature. At this stage, for each indicator, the researcher reexamined the existing measures and created a list of items for the intersectional competence construct which resulted in the first draft of the ICM. In addition to creating the first draft of the instrument, the researcher created instructions for the expert panel review with directions for how to review the items in each subset (see Appendix C).

*Expert panel.* After creating a list of potential items for Subsets A and B, the researcher sought expert validation from a panel of six authors of publications about cultural competencies, collaborative teacher preparation, and intersectionality in special education. “This process can also provide information on item clarity, language complexity, and other item-level concerns researchers may have” (Gehlbach & Brinkworth, 2011, p. 384). Although the expert panel validation is situated in the qualitative, theory-based phase of the study, the researcher applied both qualitative and quantitative analyses to the expert review of preliminary items. (The process of quantifying the experts’ content and item-related validity measures “with corresponding content validity statistics” [p. 385] will receive further attention in the subsequent sections concerning the quantitative phase of the study and the integrity measures that were taken).

For each subset of the ICM draft, the experts were given directions that corresponded with each item (see Appendix C). For Subset A of the first draft of the ICM, the expert panel member rated how comprehensible each item was along four dimensions: (a) whether the item was understandable, (b) how the item could be clarified, (c) the anticipated mode of response by preservice teachers, and (d) the relevance of each item to the intersectional competence construct of interest. Subset B included a total of five narratives with corresponding multiple choice and open-response items that followed the narratives. In this section, the reviewer rated each narrative along two dimensions: (a) whether the narrative is understandable, and (b) how the narrative could be clarified. For each multiple choice item in Subset B, the reviewer rated how comprehensible each item was along four dimensions: (a) whether the item is understandable, (b) how the item

could be clarified, (c) the anticipated mode of response by preservice teachers, and (d) the relevance of each item to the intersectional competence construct of interest. For each open response item in Subset B, the reviewer rated how comprehensible the item and scoring guide were along four dimensions: (a) whether the item is understandable, (b) how the item could be clarified, (c) the anticipated mode score, and (d) the relevance of each item to the intersectional competence construct of interest. Finally, the expert panel members were asked to provide qualitative feedback on their impression of the measure overall.

Once the researcher received the expert panel responses, a summary of the expert panel review was sent to each expert via e-mail. Attached to the e-mail, the researcher included four documents, which were:

1. Synthesis of Expert Panel - a Word document that provides a synthesis of the three summary panel reports and a brief description of how the reviewer intended to move forward with revising the ICM (see Appendix D).
2. Summary Expert Panel Subset A - a PDF file that included each item, graphical representations of the descriptive statistics for each item, and expert comments (see Appendix E).
3. Summary Expert Panel Subset B - a PDF file that included the descriptive statistics and expert comments for each narrative and item (see Appendix F).
4. Summary of Overall Impressions - a PDF file that included a table with each panel member's comments about the instrument as a whole (see Appendix G).

The expert panel reviewers were given an opportunity to read their fellow panel members' responses to the ICM. Of the six expert panel members, two e-mailed the

researcher back with well wishes. One expert asked for further updates about the subsequent stages of instrument development. As a result of the qualitative feedback provided by the expert panel, the researcher revised the ICM.

*Cognitive pre-testing interview.* The final activity in which the researcher gathered qualitative data before conducting a larger scale quantitative pilot study involved a process called cognitive pre-testing or cognitive interviews (Presser et al. as cited in Gehlbach & Brinkworth, 2011). This technique required that the researcher interview respondents and ask them to repeat item questions in their own words and to think out loud about the process of answering the question. As the interview took place, the survey designer took field notes and, at times, followed up participant responses with probing questions to clarify how respondents understand each item. Experts of this technique advise that before the survey designer makes any changes to the items, the researcher should identify clear trends from multiple respondents about any potentially problematic item (Gehlbach & Brinksworth, 2011; Willis, 2005).

The cognitive pre-testing interview is a specific interview style that allows survey researchers to collect verbal responses from intended participants and are used to evaluate whether the questions and items of a survey scale adequately capture the intended construct. It has been recommended that the researcher recruit a minimum of 10 to 15 participants to review each item on the instrument for the cognitive pre-testing (Karabenick et al., 2007). In the case of this study, 20 participants were recruited because the researcher sought to include the voices of more male participants in the qualitative phase of instrument development. The participants of the cognitive interviews

read the draft of the items in the ICM. When discussing the cognitive interview technique, Gehlbach and Brinksworth (2011) explained that

...the core of this technique usually entails the survey designer to interview potential respondents and ask them (a) to repeat the question in their own words—sometimes without repeating any words from the question itself and (b) to think out loud by reporting every thought they have as they answer the question. (Gehlbach & Brinksworth, 2011, p. 384)

The researcher conducted one-on-one interviews with the participants. The participants

could choose to participate over the phone or in person. During each of the cognitive pre-testing interview sessions, the researcher began by briefly introducing herself and by explaining the purpose of the instrument. Before reviewing the items on the scales, a sample question (e.g., “How many siblings do you have?”) was asked to give the participants an opportunity to practice rephrasing the question in their own words. The sample question also provided the participant the opportunity to practice how to verbalize his or her thinking about the question. The interview sessions were audiotaped and field notes were taken. Each participant received a separate identity letter. The responses were organized within a Word document. For each participant, the researcher documented each of the participants’ responses per item. The participant feedback from the cognitive thinking session was used to revise the ICM and scoring guides before conducting the pilot study.

## **Quantitative Phase: Empirical Evidence**

Along with the qualitative feedback, two additional considerations were taken into account in the selection and development of the questions included for each subset of items. First, the researcher avoided reverse-scored items because, in practice, reverse-scored items have been shown to reduce scale reliability (Benson & Hocevar, 1985; Liang & Zhang, 2011). Second, best practices, as identified by Gehlbach and Brinkworth (2011) are to “use at least 5-7 response anchors” that are labeled with construct-specific, verbal anchors instead of the use of numbers, “which may have implicit meaning for many participants” (p. 4). In terms of the number of items for each survey scale, best practices designate a range between 8 to 15 items per final scale. The third draft of the ICM included 18 items for Subset A and 11 items for Subset B.

Following Gehlbach and Brinkworth’s (2011) suggestions, the design of this mixed-methods study allowed the researcher to front-load the time extensive, participant-centered activities, in order to establish the theoretical and qualitative validity of the items. Nevertheless, there are some problems with instrument development that would be difficult to identify without first administering the items to a larger sample (Gehlbach & Brinkworth, 2011). The researcher continued the construct validation process by administering the third draft of the ICM to a larger population of preservice teachers in a pilot study. Onwuegbuzie et al. (2010) created a meta-framework for Instrument Development and Construct Validation (IDCV) for the creation and validation of quantitative instruments using mixed methods research. The researchers described a framework “designed to help instrument developers undergo a rigorous and comprehensive process during instrument development/construct validation” (p. 60).

Although, the IDVC did not apply a sequential exploratory analysis—(Onwuegbuzie and colleagues suggest developers begin with item development and quantitative analysis)—the researcher adapted the best practices pertaining to the procedures for the pilot-testing of the initial instrument (e.g., suggestions for emphasizing both content related validity when pilot testing and precautions needed for computing and interpreting reliability and score validity coefficients).

**Participants.** In the quantitative stage of the study, there was a large sample group consisting of 107 preservice teachers who were selected based on their desire to participate in the study and their ability to meet the minimum requirement of taking at least one course about students with disabilities. In both the quantitative and qualitative phases of the study, the researcher recruited general education and special education preservice teachers to be represented in each group for the instrumentation of the items. The participants for the pilot study were recruited in the Spring and Fall semesters of 2015 and the Spring Semester of 2016. To participate in the pilot, the students had to have at least taken an introductory course to special education. The researcher contacted the participants of the pilot study through an introductory e-mail that explained the purpose of the study and included an invitation for them to participate and complete the ICM. The invitations were sent and maintained through the online Qualtrics Survey Software account administered by FIU. The introductory e-mail provided a brief description of the study, assurance of confidentiality, and the expectations for the participant and researcher. Procuring a representative sample of intended audience for the instrument (i.e., preservice teachers from FIU as delimited in the design of the study),

maximizing return rates, and guidelines on optimally using the Internet, were all critical topics reviewed in the literature (e.g., Dillman, Smyth, & Christian, 2009).

The researcher sent follow up e-mails in order to secure a greater response rate. Completed online surveys were kept confidentially and coded. At several points throughout the pilot study period, the researcher examined participants' demographic data to determine whether a diverse group of at least 100 preservice teachers were represented in the sample. For example, in early January there were approximately 80 survey respondents. When the researcher noted the low frequency rate of male participants, she reached out to a colleague who taught the course MUE 3395, Music in Special Education, in order to recruit more male pre-service teachers.

The following responses about demographic markers were presented as multiple-choice option with an additional "other" option for participants to write in their own descriptor if the ones provided were not a fit. As is typical of teacher education programs across the country, there were far more female participants in the pilot. Of the participants who responded to the questions about their demographic information, 91.3% self-identified as female and 8.7% identified as male. The pilot participants were predominately from racial and ethnic groups that are underrepresented in teacher education programs across the U.S. FIU is an Hispanic Serving Institution (HSI) and 67.1% of the participants self-identified as Hispanic or Latino (51.5% self-identified as White Hispanics/Latinos and 15.5% self-identified as either being of Black or African descent, of mixed racial and ethnic heritage, or chose not to add any additional racial identifier). There were 17.5% of participants who self-identified as African American or Black, 3.1% as Asian or Pacific Islander, and 12.4% as White. When asked about the



primary language spoken in the childhood home, there were more participants who spoke a language other than English than those who spoke English. While 42.9% of the participants who responded reported that English was the primary language spoken in their childhood home, 6.1% selected French or French Creole, 47.4% selected Spanish, and 4.1% selected “other”.

Demographic questions about participants’ age, sexuality, religious affiliations, ability status, and hometown were presented as open response options with text entry capabilities. The participants’ age ranged between 18 to 45 years old. The median and average age of the participants were each 23.6 years, which is slightly above the age range of what is deemed a traditional college student. When asked about their sexuality, 81.5% of the participants who responded described themselves as straight or heterosexual, 17.3% used a Lesbian, Bisexual, Gay, Transgender, or Questioning (LBGTQ) descriptor, and one participant wrote in the term “asexual”. When asked to describe their religious affiliation, 16.7% indicated that they do not have a religious affiliation, 43.0% indicated that they were Catholic, 37.2% indicated that they were affiliated with a Christian (non-Catholic) religion, 2.5% indicated that they were affiliated with Islam, and 1 participant indicated that she was Wiccan. The majority of participants indicated that they do not have a disability (e.g., “totally abled”, “N/A”, “none”) and almost half did not respond to the question. Of those who did, 13.6% shared that they have a disability and 6.8% indicated that they were in the gifted program when they were in the P-12. Although there was some variance, the majority of the participants consider the area near FIU as their hometown. Of the participants who responded to the questions about their hometown, 68.1% identified a city or town within Miami Dade

County, 13.2% identified a city or town that was within Florida, but outside of Miami Dade County, 8.8% identified a U.S. city or town outside of Florida (all but one participant identified a city within a northeastern state), and 10% identified a city or town outside of the U.S.

The participants answered questions about their academic program at FIU, including their major, anticipated graduation year, and information about completed coursework. Slightly more than one quarter of the participants who indicated their major were in the Exceptional Student Education program, 16.5% in Early Childhood Education, and 42.7% in Elementary Education. There were 15 participants who were in a secondary education program (i.e., English Literature or Music Education). In other words, approximately three quarters of the ICM pilot test participants were general education majors. More than half of the participants indicated an anticipated graduation year of 2017, 15% participants indicated an anticipated graduation of 2018 or later, and 28% anticipated to graduate in 2016. In order to qualify to participate in the pilot, the participant must have taken at least one course related to special education. When asked how many courses related to students with disabilities (SWDs) they had taken, two-thirds of the participants who responded indicated that they took 1-2 courses, 15.1% indicated taking 3-4 courses, and 18.3% indicated that they had taken 5 or more courses related to students with disabilities. Of the participants who responded to the question about the number courses taken related to culturally and linguistically diverse (CLD) learners, 52.7% indicated that they took 1-2 courses, 32.6% reported taken 3-4 courses, and 9.7% reported taking five or more courses.. Four participants reported that they had not taken any courses related to CLD learners. Based on these descriptive statistics, the average

pilot test participants tended to take more courses related to working with CLD students than those related to working with students with disabilities.

A summary of the demographic information is presented in Table 5, including the frequency count of each option selected within a demographic marker, the number of participants who did not disclose or respond to the question about the sociocultural, and the percentage that the selected option represented out of the total responses.

Table 5

*Summary Demographic Information of Pilot Participants*

Demographics	<i>n</i> =107	Percentage of Total Responses
<b>Gender</b>		
Male	9	8.7
Female	94	91.3
Undisclosed	4	
<b>Age</b>		
18-22 years	51	52.6
23-27 years	37	38.1
28-34 years	6	6.2
35-45 years	3	3.1
Undisclosed	10	
<b>Race/Ethnicity</b>		
Hispanic/Latino White	50	51.5
Hispanic/Latino Non-White	15	15.5
African American/Black	17	17.5
Asian	3	3.1
White	12	12.4
Undisclosed	10	
<b>Primary Language Spoken in Childhood Home</b>		
English	42	42.9
French Creole	6	6.1
Spanish	46	47.4
Other	4	4.1
Undisclosed	9	
<b>Sexuality</b>		
Heterosexual/straight	66	81.5

Table 5

*Summary Demographic Information about Pilot Study Participants Continued*

Demographics	<i>n</i> =107	Percentage of Total Responses
LGBTQ	14	17.3
Asexual	1	1.2
Undisclosed	28	
Ability and Disability		
No disability	47	79.7
Disability	8	13.6
Gifted Program During P-12 Schooling	4	6.8
Undisclosed	48	
Hometown		
City in Miami Dade County, FL	62	68.1
Other Florida city/town	12	13.2
City/town from other U.S. state	8	8.8
International	9	9.9
Undisclosed	16	
College Major		
Exceptional Student Education	27	26.2
Early Childhood Education	17	16.5
Elementary Education	44	42.7
Secondary (English Literature/Music)	15	14.6
Undisclosed	4	
Anticipated Graduation year		
2016	28	28
2017	57	57
2018 or later	16	15
Undisclosed	6	
Courses taken that included SWD in syllabus		
1 – 2	62	66.7
3 – 4	14	15.1
5 or more	17	18.2
Undisclosed	14	
Courses taken that included CLD in syllabus		
None	5	5.4
1 – 2	49	52.7
3 – 4	30	32.6
5 or more	9	9.7
Undisclosed	14	

*Note:* SWD – students with disabilities. CLD – cultural and linguistic diversity

**Quantitative data collection and analyses: Expert panel.** The six expert panel members were located in different geographical areas throughout the U.S. The responses from the panel expert were collected through a questionnaire created as a word document and sent via e-mail (see Appendix C). The researcher adapted the expert review template suggested by Gehlbach and Brinkworth (2011) and included suggestions provided by a senior faculty member and the research assistant. Once the researcher received the expert panel reviews, the panel members' responses were inputted in Qualtrics and reports were generated for Subsets A and B. Descriptive data for each item were presented through pie graphs (i.e., expert ratings on item understandability and relevance) as well as a bar graph (i.e. anticipated mode response; see Appendices F & G). In addition to the descriptive statistics, the researcher calculated the inter-rater reliability between the experts' scores on the relevance, understandability, and expected mode responses of Subsets A and B. The researcher also calculated the inter-rater reliability on the experts' responses to the scoring guide of Subset B. To establish the inter-rater agreement statistics, the percent of agreement between the two raters and Cohen's Kappa were calculated.

**Quantitative data collection and analyses: Establishing inter-rater reliability in scoring guide.** Consensus estimates are used in research and instrument design in order to establish that a construct which may be considered quite subjective (e.g., competence, and in the case of this study, intersectional competence) can be captured independently by different raters (Osborne, 2008).

As an additional example, if the goal of your study is to understand the underlying nature of a construct that to date has no objective, agreed-on definition (e.g.,

wisdom), then achieving consensus among raters in applying a scoring criterion will be of paramount importance. (p. 31)

To establish the reliability of the scoring guide for Subset B, the researcher randomly selected the responses of 23 pilot test participants out of the 91 who answered items from both Subsets A and B of the ICM. Three of the participants' responses were used for training purposes and labeled Practice 1, Practice 2, and Practice 3. The remaining 20 were used for the purpose of establishing the inter-rater reliability statistics and were labeled numerically (Response 1-20). The researcher then met with the research assistant in person and discussed the narratives, items, and scoring guide for Subset B. The two raters practiced rating three pilot participants' responses together. As a result of the discussion and training session, the scoring guide was revised (see Appendix H).

After the items were reviewed and the scoring guide revised, the researcher and research assistant each independently scored the 20 Subset B pilot responses in one sitting. Since the researcher was one of the two raters, each rater recorded her scores through the on-line Dedoose software program that allowed the researcher to maintain rater anonymity. The use of the on-line software program was implemented in the event that more than one inter-rater session would be needed to revise the scoring guide. Once the test (i.e., Subset B of the ICM) was saved to the Dedoose account's test library, each rater was able to independently access the responses and input their rating. The researcher then used the software program to calculate the inter-rater agreement statistics for each item without seeing the rater's results; the two inter-rater agreement statistics calculated were the percent of agreement between the two raters and Cohen's Kappa.

Best practices for the benchmarking of percent agreement for four or fewer categories is set at 90% for high agreement and 75% for minimal agreement; for five to seven categories, high agreement is set at 75%. The Cohen's Kappa ranging between 0.61-.80 is considered as having substantial agreement and 0.81-.99 for almost perfect agreement (Landis & Koch, 1977).

**Quantitative data collection and analyses: Pilot study.** The online survey included the items of the ICM as well as a text space for participants' to give feedback about the "clarity, esthetics, relevancy, tone, length of time needed for a response, and, above all, cultural competence" (Onwuegbuzie et al., 2010, p. 64) of the instrument. The primary focus of the pilot was to explore content related validity, such as sampling validity and item validity, as well as to gather data to establish reliability and validity statistics. Due to the theory-driven sequential design of this study, however, Confirmatory Factor Analysis (CFA) was applied to summarize patterns of correlation between indicators and items. With CFA, the researcher specified the number of factors (i.e., eight indicators of the ICM) and specified the unique relationship for method variance. The researcher used the STATA 13 statistical software program to construct the CFA model and to predict covariance between items to establish the basis for model fit of the ICM (i.e., reliability statistics).

### **Setting of Instrument Development**

The data collected during the qualitative and quantitative phases of the study primarily came from preservice teachers who were affiliated with the then College of Education at FIU. The university is situated in an urban context, with neighboring P-12 school districts marked by substantial cultural and linguistic diversity, both in the student

body and in the teaching staff. Special education faculty at the university have made efforts to redesign both special education and general education programs in order to prepare all teachers to work with students with disabilities, but reported that collaborating with other special education faculty members has been easier than collaborating with non-special education faculty. Prior efforts to create a dual- certification/integrated elementary program have been, for the most part, a failure (L. Blanton, personal communication, November 8, 2011). Although there are courses that incorporate special education content for early childhood and elementary preservice teachers, there are some concerns that, within non-special education programs, general education preservice teachers at FIU are getting insufficient training on meeting the needs of culturally, linguistically diverse and exceptional learners.

### **Integrity of Qualitative and Quantitative Measures**

In this section, the researcher expands on the integrity measures and the set of criteria used to enhance the rigor of the study. Messick (1989) defines validity as:

an integrated evaluative judgment of the degree to which empirical evidence and theoretical rationales support the *adequacy* and *appropriateness* of *inferences* and *actions* based on test scores or other modes of assessment. (p. 13)

The mixed methods design described above (also see Table 2) delineates the theoretical and empirical evidence for the validation of the ICM. In this section, the researcher describes the measures that were taken to enhance the trustworthiness, credibility, validity, and reliability of the findings.

### **Efforts to Enhance Trustworthiness of Qualitative Phase**

As Rubin and Rubin (2011) suggest, trustworthiness, credibility and accuracy can



be built into the research design. The transcription of the audio recordings, along with the researcher's field notes during the focus group and cognitive interviews, enhanced the accuracy of the data collected. Furthermore, in order to monitor subjectivity (Peshkin, 1988) and to sustain reflexivity (Ortlipp, 2008), the researcher used exploratory and reflective journal writing throughout the study. Rubin and Rubin (2011) suggested the interviewers keep a separate notebook to monitor the emotional toll of engaging in interviews and to increase transparency within the research process. As Ortlipp (2008) suggests, the researcher journal was used to document the research process of this study, the practices of the researcher, and to reflect "critically on the processes and practices" (p. 696). Typed excerpts from the researcher journal during each phase and stage of the study are included in Appendix I.

**Credibility.** Credibility deals with the extent that the research findings are congruent with the participants' reality (Merriam, 2002). To check for the accuracy and credibility of information within an interview, the researcher applied Bogdan and Biklen's (2007) suggestion for member checking. After coding the transcribed responses of focus groups, and identifying the themes that emerged from the analysis, the researcher contacted a focus group participant from each of the three groups and asked them if they agreed with the themes that were identified. Similarly, the researcher contacted two of the cognitive interviewees and asked them if the findings were consistent with their perceptions. Member checking increases credibility and allows the researcher to confirm whether "participants in the research recognize themselves and their world in the portrait" (Rubin & Rubin, 2012, p. 65).

**Triangulation.** Triangulation also enhances the credibility of qualitative analysis. During the qualitative phase of this study, the researcher triangulated the qualitative data collected from multiple sources (i.e., general education preservice teachers, special education preservice teachers, expert scholars) to develop a pool of items for the ICM. During the analysis of the qualitative phase of this study, feedback from the different sources were triangulated to determine areas of agreement and divergence when it came to preservice teachers' conceptualization of intersectional competence.

In addition to the triangulation of the data collected in the qualitative phase of the study, the triangulation of the data collected in the quantitative phase with the qualitative phase (i.e., methodological triangulation) increased the validity of the findings. In this study, the outcomes of the pilot study were used to triangulate the data collected from the literature review, expert panel responses, focus group interviews, and the cognitive pre-testing interviews.

### **Efforts to Enhance Validity and Reliability in Quantitative Phase**

The content of the survey was developed by the researcher based on the review of literature and the outcomes of the qualitative stage of the data analysis (Creswell, 2007). Although the expert panel members were consulted during the qualitative stage to provide qualitative feedback about the preliminary indicators, the expert panel also provided ratings that were used to ascertain statistical measures of the construct validity. In order to estimate the content validity statistics of the survey instrument, expert scholars knowledgeable about intersectionality in special education, cultural competence, and collaborative education were asked to rate the extent the items capture the construct.

The expert panel review was used to quantify the level of construct validity of the first draft of the ICM. The panel of expert scholars, rated the extent that they agreed that an item or indicator captures the intersectional competence construct. Rowe and Wright (1999) explained that during the first round of ratings, the survey designer should keep the identities of the other experts from the raters. Rowe and Wright argued that anonymity is important because it allows for the responders to express their opinions freely without constraints. After the first round of ratings, the experts received feedback in the form of a statistical representation of the other raters' responses (see Appendices E and F). Rowe and Wright argued that this second feature, invites an iterative process that allows the panel members to hone their views from round to round. A feedback loop informs the participants of the other participants' perspectives, and provides a way for the expert panel to engage with other experts' response and potentially change their views. Nonetheless, none of the panel members provided additional feedback after receiving the summary of the overall panel review.

In addition to the validity statistics that emerged from the first draft of the ICM, a pilot test was administered to a sample of the preservice teacher candidates at FIU. The pilot study was used to determine an estimated completion time of the survey, ambiguous or confusing wording, item applicability, and allowed for item revision. Reliability was determined through the calculation of the internal consistency of the items that capture the intersectional competence indicators included on the survey. Internal consistency refers to the degree of interrelatedness among the items of the survey (Schmitt, 1996). Cronbach's alpha yields a statistical coefficient that represent the extent to which each item in a set of items correlates with at least one other item in the set (Cortina, 1993).

Cronbach's alpha reliability coefficient normally ranges between 0 and 1, although there is no prescribed lower limit to the coefficient. The closer Cronbach's alpha coefficient is to 1.0, the greater the internal consistency of the items in the scale (Gliem & Gliem, 2003). A reliability coefficient alpha of .70 or greater is generally considered an acceptable score of a scales' internal consistency (Cortina, 1993; Schmitt, 1996).

### **Summary**

A mixed-methods sequential exploratory design was applied to examine the extent to which the eight indicators identified through the literature review adequately captured intersectional competence. As a result of this study, the researcher created two separate item subscales, one that involved preservice teacher self-report of intersectional competence, and a second subscale is a performance-based assessment of preservice teachers' intersectional competence. Each stage of instrument development informed the subsequent stage. During the first phase, the study design emphasized the theoretical and qualitative basis for validating the ICM and involved the researcher, a research assistant, six expert panel members, and 32 preservice teachers. To enhance the credibility of the trustworthiness of the findings, the researcher triangulated the qualitative data and maintained a reflexivity journal. The second stage of the survey design involved establishing the interrater reliability statistics, the piloting of the instrument with 107 preservice teachers, and a confirmatory factor analysis to determine the validity and reliability statistics of the ICM.

## **CHAPTER IV**

### **RESULTS**

In this chapter, the researcher discusses the results of the study. The organization of the data analysis is aligned with the structure used in the design of the data collection procedures, that is, the qualitative and quantitative phases of instrument development and validation. In the first section of this chapter, the researcher presents the results of theoretical evidence obtained during the qualitative phase of the study. For each stage of the qualitative phase (i.e., the literature review, the focus groups sessions, the expert panel review, and the cognitive pre-testing interview), the researcher begins with a review of the participants involved. Then, the developmental and sequential process of the study is presented in the section by addressing either the identification of preliminary indicators, the creation of the first draft of the instrument, or the description of the revisions made to the Intersectional Competence Measure (ICM). Last, the researcher describes the final products for each stage of the qualitative phase of instrument development and validation. In the second section of this chapter, the results of the analysis for the quantitative phase and the statistical estimates gathered in establishing the empirical evidence for validation of the instrument are examined. This chapter concludes with a synthesis of the study results and the integration of all of the theoretical and empirical evidence sources of validity for the ICM. The researcher evaluates the underlying inferences about the use of the instrument including the interpretations of scores by examining the indicators identified in the qualitative phase of the study and by delineating the validity and reliability estimates garnered during the quantitative phase.

## **Results of Qualitative Phase**

The sequential phases that characterize the methodological approach of this study produced successive sources of validity evidence that informed each subsequent data collection step. The emphasis on validity during each stage of development should ultimately produce a valid instrument with acceptable standards of validity and reliability estimates for measuring preservice teachers' intersectional competence. In this section, the researcher explores the theoretical evidence obtained in the development and validation of the instrument. For each stage of the qualitative phase of this study—the literature review, focus group sessions, expert panel review, and cognitive interviews—the researcher describes the participants, the drafting and revisions of the ICM items, and the final products of the stage.

### **Literature Review: Identification of Preliminary Indicators**

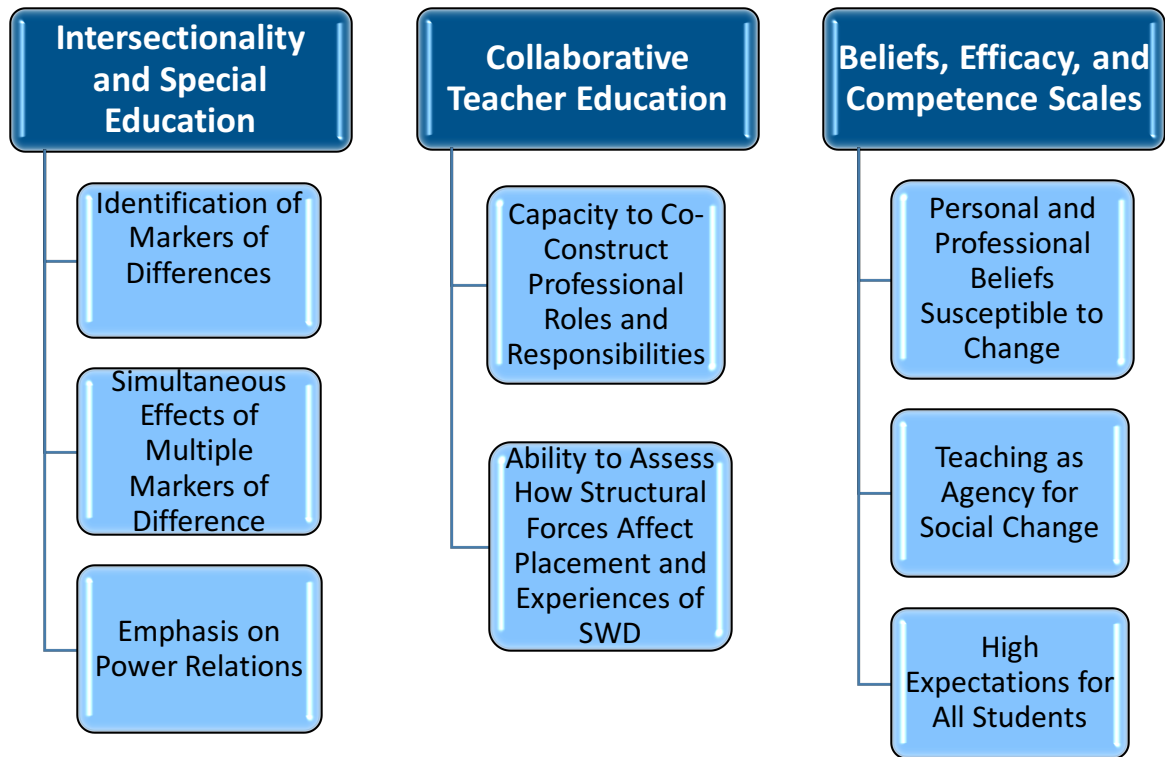
The first source of theoretical evidence was derived from the existing literature. Best practices delineated for scale and survey development (Gehlbach & Brinkworth, 2011; Simms, 2008), indicate that a review of the literature is the beginning stage of the design of an instrument intended to capture a construct. As Gehlbach and Brinkworth (2011) explained, knowledge of the literature helps designers of instruments to “define their construct so as to situate it within, connect it to, and differentiate it from related concepts” (p. 2). The researcher examined the degree of overlap between intersectional competence and other related, but distinct constructs such as social justice and cultural competence.

During the literature review, the researcher independently engaged in the research process. In qualitative research, the researcher often acknowledges subjectivities and

potential biases during the research endeavor. Consequently, early in the literature review process, the researcher began a reflective journal to document her reaction to the literature, the course of organizing the extant research studies and theoretical papers, and the logic behind the selection of the preliminary indicators of the intersectional competence construct (Ortlipp, 2008; Peshkin, 1988). Excerpts of the journal entries during this and the other stages of the study are included in Appendix I.

**Identification of preliminary indicators.** The researcher examined the literature that explored how preservice teachers are prepared and assessed to serve diverse student populations, including students with disabilities. The researcher focused on existing assessments and related concepts to intersectional competence and examined teacher efficacy and competency instruments that measured preservice teachers' readiness to instruct racially, ethnically, and linguistically diverse students and students with disabilities. The beliefs, efficacy, and competency measures, for the most part, focused on disability separate from cultural diversity and are predominately assessments that involve self-reported measures. The review of the literature warranted the need for the development of a new measure that captures the intersecting relationship between disability and other markers of difference.

On the basis of the review of the extant literature on intersectionality in special education, collaborative teacher education, and the research on the assessment of preservice teachers' competence with diversity, eight preliminary indicators of intersectional competence emerged. Figure 1 presents the organization of the three topics the researcher examined, along with the preliminary indicators of the intersectional competence construct that emerged from the literature review.



*Figure 1.* Organization of Topics of Literature Review and Preliminary Indicators

The eight preliminary indicators of intersectional competence were:

1. the ability to clearly identify sociocultural group categories and markers of difference;
2. an understanding of the interlocking and simultaneous effects of multiple markers of difference;
3. an understanding of the systems of oppression and marginalization that occur at the intersection of multiple markers of difference;
4. the capacity to co-construct and negotiate professional roles and responsibilities when teaching students with diverse abilities;



5. the ability to assess how structural forces such as cultural, linguistic, and economic factors have impacted the placement and experiences of students with disabilities and their families;
6. an understanding that personal and professional beliefs about diversity are distinct, but interrelated with one other; each is susceptible to change;
7. a belief of teaching as agency for social change; and
8. evidence of high expectations for all students.

Table 6 identifies the existing measures from which the researcher drew sample items that corresponded with the eight preliminary indicators.

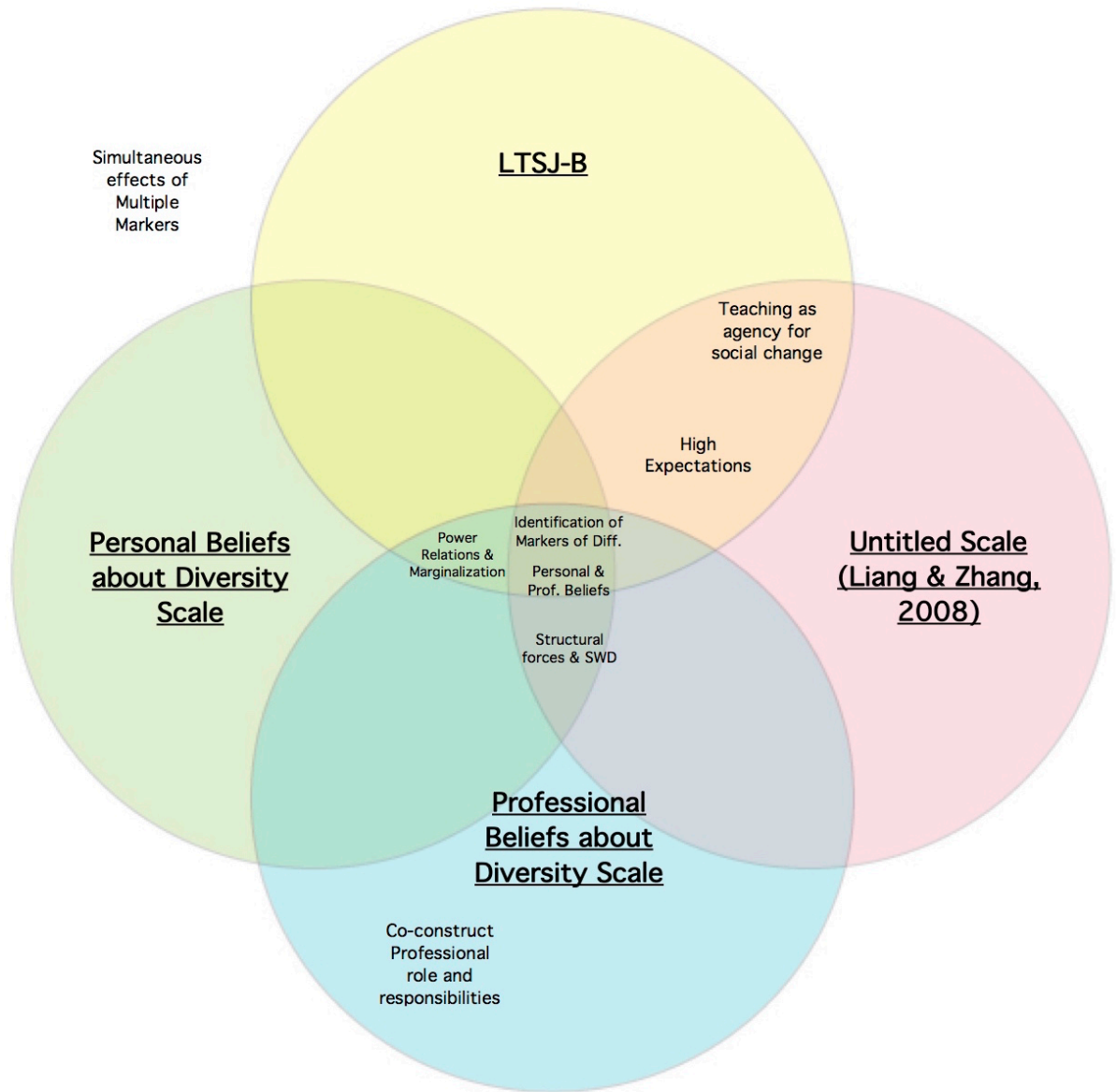
Table 6

*Intersectional Competence Indicators Compared to Existing Measures*

Indicators	LTSJ-B	Untitled Scale (Liang & Zhang, 2008)	Personal Beliefs about Diversity Scale	Professional Beliefs about Diversity Scale
Identification of markers of difference	x	x	x	x
Simultaneous effects				
Power relations and marginalization	x		x	x
Co-construct professional roles				x
Structural forces affect SWD		x	x	x
Personal and professional beliefs interrelated	x	x	x	x
Teaching as agency for social change	x	x		
High expectations	x	x		

**Product of literature review.** In addition to identifying the eight preliminary indicators, as a result of the literature review the researcher developed three products that informed the subsequent stages of the study. First, the researcher developed 10 guiding questions for the subsequent focus group sessions based on the eight indicators identified above (see Appendix A). The questions were open-ended and intended to elicit how preservice teachers talked about differences, students with disabilities, and the school practices they have observed. For example, one of the guiding questions– “Besides the students' abilities, are there any other factors that may come into play when placing a student in special education? If so, what are they?”–was developed for the indicator that captured preservice teachers’ understanding of how structural forces (such as cultural, linguistic, and economic factors) impact the placement and experiences of students with disabilities and their families. Second, the researcher created a list of 10 potential expert panel members and their contact information. The list included scholars who are knowledgeable about intersectionality in special education (Alfredo Artiles, Elizabeth Kozleski, Zachary McCall, and Federico Waitoller), cultural competence (Wanda Blanchett, Donna Ford, Robert Rueda, and Ana Maria Villegas) and collaborative teacher education (Vivian Correa and Marleen Pugach).

The researcher examined four existing measures to identify indicators and items that were similar to the intersectional competence construct. Figure 2 presents the third product, a Venn Diagram that features four existing measures with items about diversity, including items about individuals with disabilities: Learning to Teach for Social Justice Beliefs Scale (Enterline et al., 2008), an untitled scale of pre-service teachers’ cultural competence (Liang & Zhang, 2009), the Personal Beliefs about Diversity Scale and the



*Figure 2.* Venn Diagram of Preliminary Indicators in Existing Measures

Professional Beliefs about Diversity Scale (Pohan & Aguilar, 2001). Although there were two preliminary indicators represented in items across all four instruments (i.e., identification of markers of differences and the understanding that personal and

professional beliefs about diversity are interrelated), the other indicators were not. One indicator—the understanding of the simultaneous effects of multiple markers of difference—was not represented in any of the existing measures. All of the instruments presented in the Venn Diagram included questions about students or individuals with disabilities, but the items addressed disability separate from other markers of difference.

### **Focus Groups: Theory-Based Evidence**

The focus group sessions were designed to ascertain whether the preliminary conceptualization of intersectional competence corresponded with the way “prospective respondents think about it” (Gehlbach & Brinkworth, 2011, p. 3). In addition to the 10 open-ended discussion guide questions, probing techniques were used to keep the discussions on target (Rubin & Rubin, 2011). These formulaic phrases are useful in getting more details, enhancing credibility, reveal slant or biases, or to clarify. After conducting the three focus group sessions, the researcher developed the first draft of the ICM and the expert panel review instructions.

**Focus group participants.** Fourteen people were involved in the focus group sessions: 12 preservice teachers, the researcher, and a research assistant. On the day of the focus group sessions, participants self-reported demographic information by completing a brief survey before the sessions commenced. Some participants wrote in additional information to explain their circled responses. For example, one participant who circled an age range of 26-49 wrote in that she was 26-years old. During the sessions, the researcher documented self-identified information that participants shared about their participation in K-12 exceptional programs (e.g., their placement in special

education or gifted and talented programs, or disabilities that were reported throughout the discussions).

The preservice teachers were each grouped in accordance to participants' majors. Four special education majors assigned to Focus Group A, two general education majors and two special education majors in Focus Group B, and four general education majors in Focus Group C. The alphanumeric code: the letter represented their assigned focus group and the number indicated where they were seated in the round table. In Table 7, selected demographic

Table 7

*Focus Group Arrangements and Selected Self-Reported Information of Participants*

Focus Group	Member ID	Major	Gender	Age Range	Race/Ethnicity	Childhood Language	Exceptionality during P-12
A	A1	ESE	F	18-25	Hispanic	Spanish	Gifted
	A2	ESE	F	18-25	Asian	English	
	A3	ESE	M	18-25	Hispanic	English	Gifted
	A4	ESE	F	18-25	Hispanic	Spanish	
B	B1	EC	F	26-49	Asian	Urdu	Learning Disability
	B2	ESE	F	18-25	Black or African American	English	
	B3	EE	F	18-25	Multiple: Black and White	English	
	B4	ESE	F	18-25	White	English	
C	C1	EE	F	26-49	Hispanic	English	Gifted
	C2	EE	F	18-25	Hispanic	English	Gifted and Special Ed. Gifted
	C3	EE	F	18-25	Hispanic	Spanish/Spanglish	
	C4	EE	F	18-25	White	English	

*Note:* ESE – Exceptional Student Education, EC – Early Childhood, EE – Elementary

information is presented for each participant. The alphanumeric codes were also used in the transcription and coding of the data. The researcher used the information presented in Table 7 to keep track of each participant's intersecting identity as she coded and analyzed participants' responses.

**Data analysis and confirmation of preliminary indicators.** The transcription of the audio recordings, along with the researcher's notes, enhanced the accuracy of the data collected. After transcribing and verifying the accuracy of the transcription, the researcher coded the questions one by one across the separate Excel workbooks in order to ascertain patterns and differences in the vocabulary used and the topics that arose per guiding questions across the three focus groups. Furthermore, to check for the credibility of information within a focus group session, the researcher applied Bogdan and Biklen's (2007) suggestion for member checking. After coding the transcribed responses of the focus groups discussions, and identifying the themes that emerged from the analysis, the researcher contacted one participant from each focus group, participants A2, B2, and C4, for feedback on the extent that their respective focus group sessions validated the eight indicators of the intersectional competence.,

The researcher went through several iterations of analyses to confirm whether the preliminary indicators were reflected in how the participants talked about the intersectional competence construct. The researcher proceeded to condense the data and codes from the three separate workbooks into one table that included the eight preliminary indicators identified in the literature review. Table 8 summarizes the indicators confirmed in the focus group sessions, the alphanumeric codes of specific

Table 8

*Preliminary Indicators Confirmed in Focus Groups Discussions*

Indicator	Instances Found (Question # and Participant ID)	Sample Quotes From Participants
Markers of difference	Ability 1.A2, 1.B1, 1.B2, 1.B3 Age 3.A1, 3.B3 Culture 1.A2, 1.A3, 1.A4, 1.B1, 1.C2, Gender 1.C4 Gifted 1.C4, 4.A4, 5.C4, 7.B3, 7.B4 2.A1, 2.A2, 2.A3, 2.A4, 2.B1, 2.C1, 2.C4 Geography 3.A1,3.A4, 3.C4, 4.B3,10.A3,10.B1 Ethnicity/race 1.C1, 1.C4, 3.A1, 3.A2, 3.A4, 4.B1 IDEA-13 cat. 2.B1, 2.B2, 3.B3, 3.C1, 3.C4, 9.C1 Language 1.A1, 1.B1, 2.A1, 2.A2, 2.A3, 2.B3, 2.C4, 4.C1, 6.C3, 10.A1 Nationality 3.A1, 3.A4, 3.C1, 4.B1, 7.C4 Religion 1.C1, 2.C3, 8.B2, 8.B3 SES/Class 1.A1, 1.B1, 1.C1, 1.C4,3.A3, 3.C4, 4.B3 Sexuality 1.B3, 2.C1 Skin Color 1.A1, 1.B1, 3.A3, 3.C4, 10.A3 Special Ed. 2.A1, 2.A2, 2.A3, 2.A4, 2.B2, 2.C4	Different cultural groups within the United States and I think part of that would be socio-economic... As well as, male and female students... mainly that.  When I hear the word diversity, the first thing that comes into my mind is the color of the skin and different languages that people speak and how they react to different situations.  I think gender also is another label that you know... whether you are a boy or a girl, how you are going to react in classroom, that also teachers still sort of stereotype, you know? “Girls are going to do this and boys are going to this, and they are going to be more rowdy.”  ...you could be be different from the way that you learn. I think you can be different from, if whether or not you have same sex parents.

Table 8

*Preliminary Indicators Confirmed in Focus Groups Discussions Continued*

Indicator	Instances Found (Question # and Participant ID)	Sample Quotes From Participants
Simultaneous effect of multiple markers of difference	Intragroup differences	1.B3, 1.B4, 1.C4, 2.C3, 4.C4, 6.A2
	Intersections	2.C3, 2.C4, 3.C4, 4.A1, 4.A3, 4.A4 4.B1, 4.B4, 4.B3, 4.A4, 4.C1, 4.C3, 4.C4, 6.B3, 7.A3, 7.B4, 7.C1, 7.C3, 7.C4
Power Relations/ Marginalization	Criminalization	3.A1, 4.B1, 4.B3, 4.B4, 6.C1, 7.C4
	Exceptionalism	5.B1, 9.B3,
	Exclusion	3.C4, 7.C4
	Opportunity/ a chance	3.A3, 4.B1
	Outcomes	3.A3, 3.A4, 3.B1, 3.B3, 3.C1, 5.A1, 5.A3, 5.A4
Social Reproduction	5.B4, 5.C4, 7.C4	
White teachers	3.A1, 3.A2, 3.A3, 6.C4	



Table 8

*Preliminary Indicators Confirmed in Focus Groups Discussions Continued*

Indicator	Instances Found (Question # and Participant ID)	Sample Quotes From Participants
Structural forces effect placement of SWD	3.A2, 3.A3, 3.A4, 3.B1, 7.A1, 7.A2, 7.A3, 7.A4, 7.B1, 7.B2, 7.B3, 7.B4, 7.C3	A child who has a different race or if the child has a different language, the teacher has to really work hard on that child. She said that the favorites are more of those who are gifted. So why they are gifted [sic]? They are gifted because the teacher doesn't have to work really hard on that child, because it comes naturally to that child.
Co-construct Roles and Responsibilities	Diverse Colleagues Diverse Parents Students:	6.C1, 6.C3, 6.C4, 8.B4, 10.A2, 3.A1, 1.C3, 3.B3, 5.A1, 7.A2, 7.C3, 8.C3 1.C4, 4.B4, 6.A1, 6.B1, 6.B2,
Personal and Professional Beliefs Interrelate Expectations	3.A2, 3.A3, 6.A3, 6.A4, 8.B4, 1.C1, 3.A4, 5.A2, 5.A3, 5.A4, 7.A4, 9.A1, 9.A2, 9.A3, 9.A4, 9.B1, 9.B2, 9.B3,	I think that her views are going to influence her practice and because she has these types of stereotypes it's going to come out in her teaching. I think that that has a lot to do with the expectations that we set, like us teachers, for our students. Regardless of gifted, regular, special ED, I think that all teachers need to set high expectations so that their... that pressure is there for everyone and not just for one category.
Teaching as agency for social change	5.C1, 5.C2, 5.C3, 5.C4, 7.A4, 8.C3, 9.A4, 9.B3, 9.B4	You have to be sort of that light, that guiding light that shows them "you are able to do it".

responses that reflected the indicator, and samples of direct quotes that exemplified how the participants talked about the intersectional competence construct. For example, when examining whether the participants discussed interlocking and simultaneous effects of multiple markers of difference (the second indicator in Table 8), participants from focus groups A, B, and C gave responses that reflected the indicator, mainly by discussing differences within sociocultural markers of a group (intragroup differences) and directly describing the intersections of markers of difference. Furthermore, although participant B2 did not explicitly have a quote that reflected this indicator (hence, her code is not represented in that row), during the focus group she agreed with the other members' comments and when the researcher approached her afterwards during the member checking process, she confirmed that she saw the simultaneous effects of multiple markers of differences.

The researcher was especially attuned to the vocabulary and topics that the preservice teachers discussed. In addition to recording instances when participants' responses aligned with the preliminary indicators, the researcher looked for patterns in the language used by participants to describe diversity, collaborating with diverse stakeholders, and the special education process. In the following section are the topics, vocabulary, and discrepancies between how the researcher initially conceptualized the intersectional construct, and how the focus group participants discussed it

***Terms used by participants.*** The primary objectives of the focus group sessions were to understand how participants think and talk about the central construct (i.e., intersectional competence) and to determine whether the participants' language about diversity aligned with the indicators identified in the literature. The results of the

analysis demonstrated that, for the most part, the language used by preservice teachers aligned with the preliminary indicators. Although all participants were able to speak about multiple markers of differences, the special education majors tended to frame disability separate from cultural or linguistic diversity; general education majors were more likely to include ability differences within the same responses. The Exceptional Student Education majors also tended to categorize students into three main categories (i.e., special education, gifted, and general education), while their general education colleagues used sociocultural markers, engagement in extracurricular activities as well as ability markers to describe students. This pattern underscores the need for intersectional approaches toward diversity in teacher preparation, especially when training special education teachers.

Across all three groups, the participants primarily discussed inclusion as taking place in the classroom, and more specifically, the general education classroom. Only two participants, participants A2 and C4, made explicit references to inclusion in the “real world”. When discussing diversity and markers of difference, participants across the groups –and especially the general education preservice teachers of Focus Group C– acknowledged that stigma and marginalization is associated with difference in schools. Gifted and talented, however, was considered a marker of difference that was mostly associated with privilege. When providing answers, participants primarily recalled what they witnessed during field experience hours or in their own K-12 schooling. Some participants also referred to courses they took or independent reading. All participants referred to their own sociocultural markers at least once during the focus group sessions. Although participants admitted to biases they had and to instances of discrimination they

may have experienced, differences were also discussed as an asset at several points. For example, one participant shared that when out of town, she often shows off her Spanish speaking skills because it is “something that makes me interesting”.

Interestingly, just as the researcher positioned this study within the intracategorical approach to diversity and intersectionality, participants also reluctantly accepted the need for sociocultural markers, even when considering the challenges of markers of difference. As one special education major put it,

I think that yes, labels can have connotation and can also kind of determine what path you are going to take. But at the same time, I think that labels are necessary because, in order for us to help our students and to provide them access to what they need we have to know their strengths and their weaknesses so that we can provide the best for them.

There were several terms that the participants used throughout the discussions that the researcher adopted when developing the first draft of the ICM. For example, one special education participant referred to response to intervention, a concept that was included in the first draft of ICM. Although the researcher initially used the term “civil rights” to discuss equity topics, the participants were more comfortable with the term social justice. Finally, the participants would only refer to Hispanics, instead of Latinos, a term the researcher prefers.

*Discrepancies between the researcher and participants’ perspectives.* The researcher also examined if there were any discrepancies between what the literature conveyed about intersectional competence and what the preservice teachers’ conceptualization of the construct may be. For example, in the U.S. especially,

discussions about inclusion primarily focus on students with disabilities. In all three focus group sessions, however, there was extensive discussion about gifted and talented students. As a result of this finding, the researcher included language about giftedness while developing the items for the first draft of the ICM and also revised the list of potential expert to include an expert who has written on gifted education, in addition to special education and disproportionality.

Another area that would have been a missed perspective had it not been for the focus group session was related to the intragroup differences among appearance of Hispanics. One of the participants, participant C4 who self-identified as White in the questionnaire, later revealed her Hispanic heritage during the focus group session.

I'll admit that I use my physical [appearance] and my background to my advantage. Growing up, I got made fun of a lot for always having the light skin and light hair and light eyes constantly, because everybody else around me was Hispanic. So I was like the odd one out. And I would try so hard to be like, to tell them I was Hispanic too. But I grew up in a household that was so Americanized, where we did not speak Spanish in the house and if I tried to speak Spanish, I'd get made fun of that too. So eventually, I kind of just like relented and said, "No, I'm just American".

But then there have been times where I've gone away from Miami and I like to really show off that I can speak Spanish... but when it comes to being taken seriously, like for jobs, I'll go right back into saying—what I fill out for my ethnicity and my race, it depends on where I am and what it's for, because... Because there is definitely a stigma against certain things. So, if I can take

advantage of having a name that's not really ethnic, and take advantage of my look and my accent, I'm going to do it because in the end, I need to get ahead.

The participant's comment also demonstrates the intersectionality of the Hispanic experience in the U.S., namely the intersection of racial appearance—signaled by skin color, hair, color, and spoken accent— with national origins or ethnic background, which several participants referred to in their responses. According to the participants, White and lighter skinned Hispanics with less pronounced accents experience less marginalization than darker skinned Hispanics with more pronounced accents. Although the researcher, who identifies as Afro-Latina, was well aware of this dynamic, she failed to account for it in the simple questionnaire provided to the focus group participants. Consequently, all subsequent requests for participants to self-identify race or ethnic background also included a section for Hispanic/Latino participants to indicate if they also identify as being of African heritage/Black, indigenous, mixed race, or White. A question about participants' hometown and geographical considerations were also included in subsequent requests for demographic information as well as the items included in the first draft of the ICM.

**Initial development of the intersectional competence measure.** As a result of the literature review and focus groups, the researcher developed the first draft of the ICM (see Appendix J). The first draft of the ICM included two subset of items and a scoring guide for Subset B. Subset A was a multiple choice survey that included 31 initial items designed for preservice teachers to self-report their intersectional competence. Subset B was a case-based measure with 18 initial items that primarily included open-ended

responses; a scoring guide was developed to score the preservice teachers' responses to the open-response items.

**Products.** In addition to the first draft of the instrument, the researcher also developed a set of instructions for the expert panel following the model provided by Gehlbach and Brinkworth (2008). The researchers asked the research assistant to complete the first draft of the expert panel review to determine how long it would take to review the questions. The research assistant took about 50 minutes to complete the first review, but provided feedback about the formatting. The researcher also asked a senior faculty member from her university to review the expert panel instructions. As a result of her feedback, the researcher revised the expert panel review and distributed the instructions presented in Appendix C.

#### **Expert Panel Review: Theory-Based Evidence**

The expert panel review was an opportunity for the researcher to receive feedback about the intersectional competence construct from the authors and scholars whose writing informed the identification of the eight preliminary indicators. As a result of the expert panel review, the researcher revised and eliminated several items of the first draft of the ICM.

**Expert panel members.** A total of seven experts provided feedback on the ICM, six of which were selected to be expert panel members because they completed the panel review per the instructions given. Of the six final expert panel members, three were male and three were female. Four are senior faculty, while two are junior faculty. Two expert panel members, Experts B and F, have written about collaboration between special education and general education and are prominent within the community of special

education teacher education scholars. Two expert panel members, Experts C and E, are heralded by teacher educators and scholars in regards to their examination of meeting the needs of racially, ethnically, and linguistically diverse student populations. Two experts, Experts A and D, have written on intersectionality and special educations. The researcher did not ask members to self-report their demographic information, but used biographical information on their respective institutional web sites to determine that the panel represented a diverse groups of experts.

**Synthesis of expert review.** In order to assess the extent to which the expert panel agreed that the preliminary indicators capture the construct, the researcher examined the qualitative feedback and comments given per item and the overall comments about the instrument (see Appendices E, F, and G). In this section of the chapter, the researcher presents the theoretical evidence, and the qualitative analysis results of the expert panel members' responses.

In Subset A, the two indicators with the highest average relevance were the ability to assess how “structural forces such as cultural, linguistic, and economic factors have impacted the placement and experiences of students with disabilities and their families” and “an understanding that personal and professional beliefs about diversity are distinct, but interrelated with one other; each is susceptible to change.” Similarly, in Subset B, items 17 and 18 had the highest average relevance and measured how “structural forces such as cultural, linguistic, and economic factors have impacted the placement and experiences of students with disabilities and their families”. Three expert panel members indicated that the items focused on understanding teachers' identities were relevant, but more emphasis should be placed on the intersectionality of students and families.



Items that measured “the ability to clearly identify sociocultural group categories and markers of difference” in Subset A were deemed relevant, but four expert panel members asked why markers of difference such as ability, sexual orientation, and religious affiliation were not included in the questions. As a result of these comments, the items were revised to be more inclusive of these markers of difference. In Subset B, there was consensus among all expert panel members that items 1-4 were not relevant to the intersectional competence construct; these items were not included in subsequent revisions of the ICM. Furthermore, one panel member noted that too many items focused on identifying markers of difference and not enough items included example of “interlocking and simultaneous effects of markers of difference”.

In Subset A, the indicator with the lowest average relevance was “an understanding of the systems of oppression and marginalization that occur at the intersection of multiple markers of difference”. In Subset B, however, items 5-6 (which also captured this indicator) had a relatively high average relevance. Expert D critiqued that the items in the instrument tended to focus more on individuals’ experiences instead of on institutional factors and social arrangements. Expert E noted that regarding structural forces:

Some of this might be implied, but not addressed head on. For example, the item about “free lunch” (proximal indicator of poverty) in Narrative A is probably intended to elicit respondent’s understanding about ways in which inequality is structured into the school experienced. In my view, a more direct approach to assessing teacher candidates’ understanding of structured inequalities would be more productive.

After reviewing the item questions and the expert panel comments, it became evident that the questions developed in Subset A were not a fit with the description of the “understanding of the systems of oppression...” indicator. In other words, the indicator as described above captures a facet of intersectional competence but the items do not; items 10, 11, and 13 of Subset A were not included in subsequent drafts of the instrument because they did not adequately address “systems of oppression and marginalization”. Item 14 in Subset A and the narratives in Subset B were revised to adequately represent the indicator.

Although the eight preliminary indicators held up after expert panel review, numerous items required editing in order to better capture their associated indicators and the overall construct. As Expert F described that “it’s less that the factors might not be represented and more that some of the questions might not get at the factors adequately”. Similarly, Expert C stated that “some of the items/questions do not seem directly focused on the construct being assessed”. For example, most expert panel members found that the items that addressed RTI went beyond the focus of the intersectional competence construct. Expert A said that the “final narrative appears to emphasize RTI over intersectionality”. Expert E suggested that the definition of intersectional competence – understanding of diversity and how students, families, and colleagues have multiple sociocultural markers that intersect in nuanced and unique ways– may need to be expanded because the collection of indicators “seem to extend beyond the definition provided.”

The expert panel members were asked to predict anticipated mode responses. The purpose of anticipating responses was for the researcher to eliminate items that would not

produce an adequate range of means during quantitative data analysis. Two expert panel members expressed concerns about the lack of description/guidance regarding what stage the hypothetical respondents were within their teacher preparation program. Expert E pointed out that that the researcher should be cautious when interpreting expert panel members' anticipated mode responses due to the lack of standardization of the anticipated target audience.

Several items did not have a range of anticipated responses. Two of these items (Subset A, items 12 and Subset B, item 9) were not included in subsequent revisions of the ICM; item 13 was revised. One panel member critiqued item 1 of Subset A because "it's a 'gimme' question—not at all subtle so I think there won't be any spread in the responses". The expert panel members' anticipated mode response for item 1, however, ranged from fairly benefit to extremely benefit. The researcher kept the item, but revised the language per Expert F's concern.

Expert B brought up the problem of social desirability bias that also came up during the focus group sessions with preservice teachers. As one college junior put it, "millennials are really good at saying the right thing." Furthermore, in a comment about an open response question, Expert F wrote:

This could be a question/response that has to do with whether the respondent knows how to answer the question well and writes well more than the responses reflecting a belief about assets. A good writer could answer this without deep conviction about the issues.

One of the reasons that a case-based assessment (Subset B) was created for this instrument was to elicit responses that go beyond participants' self-reported beliefs.

**Product.** The expert panel members were very thorough and specific in providing feedback about the wording, format, and understandability of each item. The researcher reviewed the comments and suggestions made about clarification of meaning in order to revise the questions, response anchors, and narratives. As a result of the literature review, focus groups, and expert panel, the researcher developed the second draft of the ICM included in Appendix L. In addition to the item and narrative revisions, eight items were eliminated from Subset A for a total of 23 items in second draft of the ICM. Four items were eliminated from Subset B for a new total of 14 items.

### **Cognitive Pre-testing Interview: Theory-Based Evidence**

Karabenick and colleagues (2007) recommended that the researcher recruit a range of 10 to 15 participants to review each item of an instrument during the cognitive pre-testing. In this study, 20 diverse participants were selected and all interviews were conducted within a 5-day period. Three cognitive pre-testing interviews took place in person, while the remaining 17 interviews were conducted over the phone; all of the interviews were audiotaped.

**The researcher's role during the cognitive interview process.** During each of the cognitive interview sessions, the researcher began by briefly introducing herself and by explaining the purpose of the instrument. Before reviewing the items on the scales, a sample question (e.g., "How many siblings do you have?") was asked to give the participants an opportunity to practice rephrasing the question in their own words. The sample question also provided the participant the opportunity to practice how to verbalize their thinking about the question. The participants were then requested to summarize each item in their own words, select an answer, and explain why they selected their

answer. Each interview took approximately one hour. By listening to the verbalization of participants' thoughts, and at times, their confusion about a question, the researcher was able to ascertain which items were redundant or unclear. The researcher was best able to gauge the participants' vocabulary and ideas related to the intersectional competence construct during the section of the cognitive pre-testing interviews that required participants to justify their responses to the items.

In addition to the audiotape, the researcher took field notes during each session and, with the exception of the in-person interviews, wrote her reactions to the participants' responses within the notes. During the 5-day data collection period, the researcher only wrote in her reflexivity journal once. She found that many of her thoughts about the research experience were expressed in the field notes. After the interviews were completed, the researcher resumed journaling by reflecting on the overall cognitive interview experience; she continued to monitor her subjectivity while interpreting the data collected (e.g., excerpt from November 20, 2015 in Appendix I). The researcher applied member-checking techniques with five of the participants in order to enhance the trustworthiness of the interviews. The researcher shared a copy of her field notes (without the researcher comments) with two of the phone interview participants within 24 hours of their respective interviews. The researcher conducted an immediate member check with the three participants who met with her in person. All participants who participated in the member-checking process corroborated the accuracy of the data collected.

**Cognitive interview participants.** In Appendix L, an itemized list of each participants' response to each demographic question is included. The researcher referred

to the itemized table as she analyzed the interview responses in order to assess participants' intersecting identities. Six of the participants were special education majors. The remaining participants were a mix of general education majors that included Early Childhood, Elementary, and English Education. Fifteen of the participants self-identified as female, 3 males, and one undisclosed their gender identification (during the interview, the researcher assumed the participant was a male). During the cognitive interview stage of the qualitative phase—with a total of three self-identified males and one participant whom the researcher engaged by using male-gendered pronouns—the researcher was able to speak with more male (or non-female) participants than during the focus group sessions. The four non-female participants initially indicated that they would prefer an in-person interview. Two were interviewed in person and two eventually decided to participate via phone interview due to scheduling conflicts. Although there were more male participants in the cognitive interview than the focus groups, there was slightly less racial and ethnic diversity among the 20 participants.

**Cognitive interview participants' attitudes and language about diversity, inclusion, and collaboration.** Engaging in the cognitive pre-testing interviews afforded the researcher a second opportunity to engage with how preservice teachers spoke about the intended construct. For example, of all who participated in the qualitative phase of instrument development, Participant D was the only preservice teacher to explicitly use the term “intersectionality”. Although the focus group participants were able to discuss the ideas explored by intersectionality theory, the researcher chose not to use the term in drafting the first draft of the ICM items because it was not a term used often by the intended instrument audience. The language used by the cognitive interview participants

corroborated the researcher's decision to leave out the term "intersectionality" from the ICM.

In contrast to the focus group discussions—where the participants were speaking with peers from their respective programs—during the cognitive interview the participants engaged in a one-to-one (sometimes face-to-face) conversation with the researcher about education and ideas such as race, gender, disability, oppression, poverty, inequality, and other challenging topics. In her reflexivity journal, the researcher noted that engaging in the cognitive interview process was far less emotionally taxing than engaging in the focus group discussions. Whether it was because the discussions were focused on the items or because there was no other person around to engage with, the researcher noted that, in general, the cognitive interview participants tended to be more reflective about their own attitudes and beliefs than the participants in the focus group sessions. Another contrast between the cognitive interview and the focus group sessions was that there were no clear patterns that connected the participants' responses to their program majors. Below, the researcher identifies several instances where the interviewees' responses aligned with the indicators of the intersectional competence construct.

*Evidence that preservice teachers see diversity as an asset.* The concept of diversity as an asset is represented in the overall concept of the intersectional competence construct and is most fittingly captured in three of the eight indicators of the ICM (i.e., capacity to co-construct professional roles and responsibilities, understanding that personal and professional beliefs are interrelated, and evidence of high expectations for all students). The original description of the preliminary indicators, however, did not

include explicit language that addressed an asset-based approach toward differences. The cognitive interviews underscored the need to include language about the benefits of diversity in the indicators. In all 20 interviews, there was at least one instance where the participant indicated that diversity, in terms of representations of different ethnicities and cultures, would be of benefit for a school. Their perception of diversity as an asset was represented in their description of the items as well as in the justification of their responses. For example, when providing an answer about a narrative describing the presence of a White teacher, Ms. Gardner, in a school with a predominately African American/Black school population, Participant K noted that her presence was as a way to promote diversity:

Ms. Gardner is diverse: she grew up in the Midwest with a homogenous community. It's another aspect of diversity. Most people think of Black and Hispanic when thinking of diversity, but since the school is predominately Black and Hispanic she can bring a diverse perspective.

The participant, an ESE major who self-identified as a straight, Christian, White Hispanic/Latino male from Miami-Dade County, clearly articulated that diversity goes beyond “Black and Hispanic”. His response included an explanation of how Ms. Gardner’s geographical difference—which intersects with her Whiteness, although not explicitly stated— can be of benefit for the students represented in the narratives.

***Identifying sociocultural group categories and the simultaneous effects of multiple markers of difference: Age, African Heritage, and American Identity.***

Although the narratives in Subset B did not specify the ages of the two teachers, participants interpreted the differences in the teachers’ years of teaching experience as



differences in age. One participant noted how the differences in age could impact each teacher's practice.

Ms. Gardner is probably older and Ms. Delgado is fresh. That can be a challenge. [For Ms. Delgado] everything is new and she still has a lot to learn about the way they work. Maybe when they share ideas, there would be some disagreement. For students, it's good to have older and younger teachers together. They can feel when a teacher is new and young and can attempt to take advantage of her because they think it's not as strict or they don't listen to her. The younger teacher is more modern and can understand technology more.

Two other preservice teachers, Participants E and Q, also saw the age difference as a potential challenge. Participant E noted that "one challenge that might arise is that they might have conflicting ideas because they are from different generations". Speaking about Ms. Gardner, Participant K stated that "teaching for so long, she feels like she doesn't have to listen to the younger teacher."

Another marker of difference that was often brought up in the interviews about Subset B was the racial and ethnic identity of Ms. Delgado (and to a lesser extent, of Ms. Gardner). The researcher, who like the Ms. Delgado character self-identifies as Afro-Latina, noted that there were instances when the participants who self-identified as White Hispanics/Latino, seemingly ignored or erased the part of the narrative that acknowledged Ms. Delgado's African heritage. ....For example, when Participant S explained the benefit of Ms. Delgado teaching at a school, he said, "She's Hispanic. Even though most of the students are African American, she will be able to relate to her students who are minorities". In this response, there is an evident privileging of the

“Hispanic” and “minorities” identities, even though the narrative did not use that language and instead used the terms “African” and “Latina”. Participant P, another cognitive interviewee who self-identified as White Hispanic/Latina, associated being of African heritage as something that may bring shame to some: “ Ms. Delgado identifies with both her African and Latino heritage and she speaks Spanish and English. She wants to embrace her African heritage because she’s not ashamed.”

Participant Q, who self-identified as White, noted that Ms. Gardner is “completely American”. (The confluence of Whiteness with American identity also emerged during the focus group interviews with the participants who self-identified as Hispanic/Latino and those who considered a city in Miami Dade County as their hometown). In the narrative, there was explicit language that stated that Ms. Delgado was the first in her family to be born in the United States. The narrative also stated that Ms. Gardner was from a community of families who were “descendants of immigrants who migrated to the area in the 19<sup>th</sup> century from Sweden, Norway, Denmark, and Germany”. The use of the term “completely American” to describe Ms. Gardner implied that the other characters from the narratives were either not American or only somewhat American.

One of the hallmarks of intersectionality theory is the concept of simultaneous effects of multiple sociocultural markers. When asked about the idea of privilege, Participant L recognized the effects of the multiple markers of race, gender, age, and socioeconomic status:

There is something called White privilege.... Just listen to the news for example. A young, Black man with a hoodie and it’s automatically associated with stealing... that’s called White privilege. I haven’t seen as much with wealth...

but in terms of privilege, White rich and White poor have the same benefits that come from being White.

Participant I grew up near the same area where Trayvon Martin—a young, Black man who was gun downed after being confronted by a neighborhood vigilante—was originally from. The image of a hoodie that she included in her response evoked recent local and national protests surrounding Martin’s death.

*Understanding of systems of oppression and marginalization: Low-income parents “do not have time for their children”.* During the cognitive interviews, the researcher noted 13 instances where the participants stated that parents from lower income families do not have time to work or help their children with their school work. For example, there were several participants who associated students’ participation in free and reduced lunch, with lack of parent involvement. After the first day of interviewing, the researcher noted in her reflexivity journal the irony of the perception that parents and families of lower income brackets work more hours and have less time: “Wouldn’t families with more money be thought of as working more hours? Why is poverty or low income associated with less time for kids?” On day two of the cognitive interviews, Participant G was more explicit about the relationship she saw between income and a parents’ availability to work with their children.

When we look at the demographics of the school, and also how many students are in the free and reduced lunch program, that information is related to school’s performance because coming from poor families is related to parents not being able to buy all the school materials or engage their schools in academic activities because they don’t have time. They work a lot.

Later in the interview, the participant indicated that more affluent families were able to afford a tutor for their children, even if they had to work more hours.

On the other hand, Participant I considered how children who participate in free and reduced lunch program may be facing a different problem: families who may not be working “enough”.

Parents may not be working enough. The children might not be eating enough at home and not be able to function. Parents with children in free and reduced lunch may have their kids come to school for free lunch... those numbers matter...

The participant went on to elaborate that students who come from low income homes may not have access to the same nutrition as more affluent families. Her responses to the ICM items are evidence of an understanding of systems of inequality and how structural inequality impact academic performance, two of the eight indicators of the intersectional competence construct.

***Personal and professional beliefs are interrelated and susceptible to change, and maintaining high expectations.*** The participants often reflected on their course work or field experiences when justifying their answers to the items on the ICM. For example, when explaining why she responded that non-White students are “often inappropriately placed in special education programs”, Participant Q, an Elementary Education major, remarked how a course changed her mind about disproportionality. “Before my special education course, I would have said slightly... I feel like there’s a big issue now after seeing the statistics.” Her quote demonstrates how personal and professional beliefs, though interrelated, are susceptible to change.

Participants also expressed their belief that field experience can modify personal and professional beliefs when reflecting on the character of Ms. Delgado's extensive field experience. Participant F effectively explained why field hours at different types of schools matter: "Ms. Delgado got to 100 hours of field experience and she may have gotten to go to one school that is wealthier, one that faces poverty and different types of students and faculty who molded her to be the type of teacher she can be. The field hours may have shown her how she can interact with different students." Similarly, Participant J said of Ms. Delgado: "She has been exposed to different types of schools which could have influenced her teaching because her cultural lens has been expanded instead of having someone who has only been in one school."

Participant F called on her own field experience when answering a question about maintaining high expectations for students who are English language learners. She mentioned how in her field experience she saw a similar situation as the character of Abner in Narrative E, who had very little prior experience with formal schooling. In her response, she indicated that by seeing how the teachers maintained a high level of language interventions, the student who had recently emigrated was able to meet grade level expectations.

***Co-construction of professional roles and responsibilities and teaching as advocacy for social change.*** Several cognitive interview participants noted that the differences between Ms. Gardner and Ms. Delgado personal and professional backgrounds in the narratives may be a potential challenge. But when asked explicitly to explain three skills and efforts that would enhance collaboration, understanding of diversity was not mentioned. Half of the cognitive interview participants were not able to

identify three skills, and only three interviewees stated that acknowledging each other differences and diverse backgrounds is a skill necessary for collaboration. One example of a participant who saw understanding diversity as a part of collaboration was Participant R. She identified the need to communicate about each other backgrounds as a necessary part of communication: “They need to be aware of each other’s background and see that where one lacks, the other can enhance and complement each other. For example, Ms. Delgado can help Ms. Gardner with understanding the cultural background of the students”.

When describing the skill sets necessary to implement effective collaborative practice, Participant N also explained the importance of teaching as advocacy. She described that compromise is a collaborative skill, but with the following caveat: “teachers should also be able to take a stand, when they see something that is not right. You should have the determination to stand up for your belief with enough evidence, and based on evidence.”

**Clarifications made and the elimination of redundant items.** The researcher asked half of the participants to begin with Subset A and the other half to begin with Subset B to see if the quality of responses would alter depending on the order of the presentation. There was no substantial difference in persistence or in the quality of the responses and most participants did not have a preference. Furthermore, the researcher noted how quickly the respondents answered the items in Subset A. Consequently, the researcher decided to present Subset A first in the subsequent pilot of the instrument because best practices suggest that questionnaires and instruments begin with less cognitively demanding questions in order to motivate the participant to complete all of

the items (Dillman, Smyth, & Christian, 2009). In the description of the results of the quantitative phase, however, the researcher will explain in detail how the items in Subset A were shown to be more cognitively demanding, a finding that did not emerge during the analysis of the cognitive interviews.

Prior to the cognitive interviews, three Expert Panel Review members recommended that the researcher include a prompt to indicate that each of the narratives in Subset B is built on the previous narrative; during the cognitive interviews, the researcher orally cued the participants of the cumulative aspect of the narratives. By the third interview, the researcher also found it useful to explain to the participants that they could go back to review previous narratives to answer any questions. These oral directions were eventually written out in the third draft of the ICM.

**Product.** The researcher reviewed the comments and suggestions about the items made by the participants during the interviews. As a result of the cognitive interviews, the researcher revised the questions, response anchors, narratives, and scoring guide of the ICM. An additional five items from Subset A were eliminated for the third draft of the ICM and three items were eliminated from Subset B (see Appendix M for the third draft of the ICM). In addition to eliminating eight items, six items were revised in order to better capture the intersectional competence construct. Table 9 includes a summary of the changes made to the items as a result of the cognitive interview.

Table 9

*Changes to ICM Implemented as a Result of the Cognitive Interviews*

ICM Draft 2 Item #	Language of Item Before Cognitive Interviews	ICM Draft 3 Item # and Changed Language
Subset A Item 3	<p>Is the attention that girls receive in school comparable to the attention boys receive?</p> <p>girls receive much less attention than boys            girls receive slightly less attention than boys            girls receive the same attention as boys            girls receive slightly more attention than boys            girls receive a lot more attention than boys</p>	<p>Is the attention that girls receive from teachers in schools comparable to the attention boys receive?</p> <p>girls receive much more negative attention than boys            girls receive slightly more negative attention than boys            girls receive the same attention as boys            girls receive slightly more positive attention than boys            girls receive much more positive attention than boys</p>
Subset A Item 11	<p>Are teachers expected to adjust their preferred mode of instruction to accommodate the needs of all students?</p>	<p>Should teachers be expected to adjust their preferred mode of instruction to accommodate the needs of all students?</p>
Subset A Item 12	<p>Do parents and families possess knowledge and expertise that can increase the educational benefits for students?</p> <p>parents and families possess no knowledge and expertise at all            parents and families possess a little knowledge and expertise            parents and families possess some knowledge and expertise            parents and families possess quite a bit of knowledge and expertise            parents and families possess a great amount of knowledge and expertise</p>	<p>Do parents and families possess knowledge and expertise that can increase the educational benefits for students?</p> <p>there are no parents or families who possess knowledge and expertise at all            a slight amount of parents and families possess knowledge and expertise            a fair amount of parents and families possess knowledge and expertise            a great amount of parents and families possess knowledge and expertise            all parents and families possess knowledge and expertise</p>



Table 9

*Changes to ICM Implemented as a Result of the Cognitive Interviews Continued*

ICM Draft 2 Item #	Language of Item Before Cognitive Interviews	ICM Draft 3 Item # and Changed Language
Subset A Item 12	Do parents and families possess knowledge and expertise that can increase the educational benefits for students?  parents and families possess no knowledge and expertise at all parents and families possess a little knowledge and expertise parents and families possess some knowledge and expertise parents and families possess quite a bit of knowledge and expertise parents and families possess a great amount of knowledge and expertise	Do parents and families possess knowledge and expertise that can increase the educational benefits for students?  there are no parents or families who possess knowledge and expertise at all a slight amount of parents and families possess knowledge and expertise a fair amount of parents and families possess knowledge and expertise a great amount of parents and families possess knowledge and expertise all parents and families possess knowledge and expertise
Subset A Item 14	Is a student's school success dependent on how hard they work to learn?	Is a student's academic success dependent on how hard they work to learn?
Subset A Item 18	Is it more important for students who immigrate to the U.S. from countries in which a language other than English is the dominant language to be fully immersed in English in school than to spend time maintaining and developing their native language proficiency?	For students who immigrate to the U.S. from countries in which a language other than English is the dominant language, is it more important for students to be fully immersed in English in school than to spend time maintaining and developing their native language proficiency?
Subset B Item 1	Is the school's demographic composition (such as the percentage of students eligible for free and reduced lunch or the percentage of Black/African American students) related to the school's performance on the state assessments?	What information, trends, or statistics identified in Narrative A--including Table 1 and Table 2-- do you believe are related to the school's performance on the state assessments? Explain why the information, trends, or statistics you identified are important to take into consideration.

In Items 3 and 12, changes were made to the item questions and response anchors, while the other changes were made only to the item questions. Only one change was made to a narrative; as a result of two participants who asked what the PD acronym stood for, the third draft of the ICM was changed to explicitly state “professional development” in Narrative D.

In terms of the number of items for each survey scale, best practices designate a range between eight to 15 items per final scale. The third draft of the ICM included 18 items for Subset A and 11 items for Subset B; the revised scoring guide for Subset B was also modified to reflect the 11 questions (see Appendix M). The researcher included a slightly larger item pool for the pilot in order to confidently produce at least three valid item for each of the eight indicators of the intersectional competence construct. These items were included in an on-line format through the *Qualtrics* system and distributed to pilot test participants via e-mail.

As a result of cognitive interviews, the researcher recognized the need to expand the definition of the indicators to explicitly state that the intersectional competence construct involves an understanding of diversity as an asset when it comes to collaborating with different stakeholders and meeting the needs of diverse learners. The cognitive pre-testing participants discussed the idea of diversity as a strength during the interviews. Table 10 demonstrates how the preliminary indicators were originally stated along with the changes to the language of the indicator that resulted from the analysis of the qualitative the study.

Table 10

*Changes to the Language of Intersectional Competence Indicators*

Language of the preliminary indicator	Final Language of the indicator
<p>The ability to clearly identify sociocultural group categories and markers of difference.</p>	
<p>An understanding of the interlocking and simultaneous effects of multiple markers of difference.</p>	
<p>An understanding of the systems of oppression and marginalization that occur at the intersection of multiple markers of difference.</p>	
<p>The capacity to co-construct and negotiate professional roles and responsibilities when teaching students with diverse abilities.</p>	<p>The capacity to co-construct and negotiate professional roles and responsibilities when teaching students with diverse abilities with the recognition that diversity among stakeholders is an asset to collaboration.</p>
<p>The ability to assess how structural forces such as cultural, linguistic, and economic factors have impacted the placement and experiences of students with disabilities and their families.</p>	
<p>An understanding that personal and professional beliefs about diversity are distinct, but interrelated with one other; each is susceptible to change</p>	<p>An understanding that personal and professional beliefs about the value of diversity are distinct, but interrelated with one other; each is susceptible to change</p>
<p>A belief of teaching as agency for social change</p>	<p>A belief of teaching, in collaboration with students and their families, as agency for social change.</p>
<p>Evidence of high expectations for all students.</p>	<p>Evidence of high expectations for all students that includes an asset-based approach toward student diversity.</p>

## **Results of Quantitative Phase of Instrument Development**

In this final section, the researcher will review the empirical evidence for validating the ICM. The researcher begins by presenting the inter-rater reliability statistics of the expert panel review. The researcher then provides a description of the inter-rater reliability statistics for the scoring guide of Subset B. A summary of the participants' responses to the ICM, as well as their feedback on the structure, understandability, and purpose of the items is included. Finally, the reliability statistics for the ICM pilot results of the ICM are presented.

### **Expert Panel Review: Empirical Evidence**

The expert panel review members were asked to rate the relevance and understandability of the items of the initial draft of the ICM (see Appendix C for the Expert Panel Review Instructions). The researcher used ReCal3 (Reliability Calculator for 3 or more coders; Freelon, 2010), an online utility, to compute inter-rater reliability coefficients for data coded by the six experts. Although the primary emphasis of the expert panel review was to address question one of this study, that is, to establish the theoretical evidence of the intersectional competence indicators and the overall construct, “this process also offers designers the chance to quantify the content validity of their scale” (Gehlbach & Brinkworth, 2011, p. 5). The inter-rater results, which is a measure of consistency across the expert panel ratings, are presented for the relevance and understandability of each subset.

**Relevance inter-rater ratings.** The experts' scores on the relevance of each item measured whether they deemed that the items were accurately capturing the intersectional competence construct. The experts rated each item's relevance on an

ordinal scale of one through five, one being “not relevant at all” and five being “extremely relevant”. For Subset A, there were five items that were deemed to be only “somewhat relevant to the construct” across the raters (see Subset A items 7, 10, 11, 13, and 17 in Appendix C); the other items had three or more expert panel members who rated the item as quite or extremely related. The average pairwise percent agreement for the relevance of Subset A items was 68.8% and the average pairwise Cohen’s Kappa was 0.48. Considering that the raters did not receive any formal training in how to judge the items, and that they represent different communities across teacher education, the Cohen’s Kappa demonstrated moderate agreement in terms of how the panel members judged the relevance of Subset A.

In Subset B, five items received low relevance scores (see Subset B items 1-4 and 16 in Appendix C). The remaining items received higher relevance scores from at least three experts. The average pairwise percent agreement for Subset B was 58.1% and the average pairwise Cohen’s Kappa was 0.27. There was more consistency across the expert members’ ratings of relevance in Subset A than there was in Subset B. A possible explanation for the lower inter-rater reliability, is the raters’ differences in their knowledge base about certain types of diversities. For example, one expert who has written extensively about cultural competence in teacher education admitted that she did not know if a question about response to intervention (RtI) was a fit with the construct or not, but she scored the question as having being quite relevant. The special education experts, however, did not hesitate to indicate that it was not relevant to the construct of interest. Furthermore, one rater expressed that he did not feel that the case-based approach for the items in Subset B was appropriate for measuring the intersectional

competence construct. “Some of the items/questions do not seem directly focused on the construct being assessed – for example perceptions about general instructional practice rather than beliefs/views about intersectional competence”. Consequently, Expert C’s relevance scores for Subset B deviated substantially from that of the other five raters and this may account for the lower percent agreement and Cohen’s Kappa for Subset B. Although best practices indicate that multiple opportunities to demonstrate a construct increases reliability of an instrument (i.e., in the case of the ICM, the self-reported items about beliefs and the case-based items about general instructional practices), Expert C’s conflicting attitude about what the ICM should be assessing resulted in lower inter-rater reliability.

**Understandability: inter-rater reliability.** The expert panel members also rated the understandability of the items and narratives of the first draft of the ICM. The researcher initially focused on the qualitative feedback about how to improve item understandability during the revision of the ICM, but also took note of the range of understandability scores. The inter-rater reliability statistics were much lower for understandability than they were for relevance: Subset A had an average pairwise agreement percentage of 38.7% and an average pairwise Cohen’s Kappa of 0.11, while Subset B had a pairwise agreement percentage of 49.9% with an average pairwise Cohen’s Kappa of 0.27. In other words, although there was moderate agreement about the relevance of the items, there was a greater range in terms of the experts’ thoughts on how clear each item was. One possible explanation for the lack of consistency of understandability ratings is that, by the design and selection criteria for the expert panel review, each member had a deeper understanding of some indicators of the intersectional

construct than others. Furthermore, there was more consensus about the understandability of the items in Subset B than Subset A, with the experts showing more agreement about understandability of the Narratives, items, and response anchors in the case-based portion of the ICM.

The above inter-reliability statistics were calculated from an expert panel review of the first draft of the ICM. The results describe the consistency by which content validity (that is the relevance and understandability scores) were established across the six experts. The subsequent section will describe the methods by which the reliability and validity scores were established for the third draft of the ICM.

### **Establishing Inter-rater Reliability in Scoring Guide for Subset B**

Of the 107 completed pilot test responses, the researcher randomly selected the Subset B responses of 23 participants. Three of the participants' responses were designated for the purpose of training the research assistant to use the scoring guide; these were labeled Practice 1, Practice 2, and Practice 3. The remaining 20 were rated independently by two raters—the researcher and research assistant—in order to establish the inter-rater reliability statistics of the scoring guide; these responses were labeled numerically (Response 1-20).

The researcher and research assistant met together in person to discuss the narratives, items, and scoring guide for Subset B. The two raters practiced rating three of the responses together. As a result of the discussion and training session, the scoring guide was revised (see Appendix H). After the items were reviewed and the scoring guide revised, the researcher and research assistant scored the 20 Subset B pilot responses independently. Table 11 shows two measures of the inter-rater reliability of their coding,

the percent agreement and the Cohen's Kappa, for each of the 11 Subset B scoring guide items.

Table 11

*Initial Inter-rater Reliability Results of Two Coders*

Scoring Guide Items	Percent Agreement	Cohen's Kappa	<i>N</i> Agreements	<i>N</i> Disagreements
Item 1	75	0.67	15	5
Item 2	80	0.51	16	4
Item 3	90	0.80	18	2
Item 4	85	0.72	17	3
Item 5	85	0.70	17	3
Item 6	70	0.62	14	6
Item 7	75	0.60	15	5
Item 8	60	0.35	12	8
Item 9	70	0.46	14	6
Item 10	85	0.76	17	3
Item 11	80	0.73	16	4

The researcher detected problems with initial inter-rater reliability for the scoring guide of items 8 and 9. These set of scores had low Cohen's Kappa and low percent agreement. The remaining items represented good inter-rater agreement according to best practices and suggestions for the interpretations of the kappa-statistic measurement of agreement made by Landis and Koch (1977). With the exception of Subset B items 8 and 9, the Cohen's Kappa for Subset B scoring guide ranged from .52 to .80. The initial percent agreement of all items ranged from 75% to 100% (with the exception of items 6, 8 and 9). The researcher met with the research assistant one more time to discuss the language in the scoring guide for items 6, 8, and 9 and to discuss the importance of the scoring guide alignment to the eight indicators of the intersectional competence construct.



They then independently re-scored the responses for Subset B. Table 12 shows the results of the second iteration of ratings.

Table 12

*Second Round Inter-rater Reliability Results of Two Coders*

Scoring Guide Items	Percent Agreement	Cohen's Kappa	N Agreements	N Disagreements
Item 1	75	0.67	15	5
Item 2	90	0.76	18	2
Item 3	90	0.80	18	2
Item 4	90	0.82	18	2
Item 5	85	0.70	17	3
Item 6	80	0.74	16	4
Item 7	75	0.60	15	5
Item 8	85	0.70	17	3
Item 9	85	0.74	17	3
Item 10	85	0.76	17	3
Item 11	80	0.73	16	4

Once the inter-rater reliability for each item in the scoring guide was established with high agreement, the researcher scored the remaining 66 Subset B respondents by scoring all responses to one item, all at once each in one sitting. The scores were kept within a large Excel worksheet that was saved in its comma separated value (CSV) format.

**Pilot Test Results**

The distribution of the pilot was facilitated and maintained through a *Qualtrics Survey Software* account administered by FIU. The researcher used the *Qualtrics* e-mail server to e-mail and record recruited participants' engagement with the pilot. A total of 201 e-mails were sent and opened by preservice teachers of whom 117 clicked and opened the link of the ICM pilot. Of those who began the pilot, 107 participants

completed Subset A, while 86 participants answered items in both Subsets A and B. Once the participants clicked on the link, the survey would remain available for up to four weeks and participants were able to complete the survey at their own convenience during that period. There were a total of 76 participants who completed the ICM within 24 hours of opening the link; 63 took Subset A and B and, on average, spent 69 minutes to complete the items. The participants who only completed Subset A, on average spent 10 minutes to complete the 18-item subset. Based on these averages, the researcher recommends that further piloting of the ICM be constrained to a 90-minute session.

Of the 107 participants who completed Subset A, 86 continued to Subset B. The researcher scored the participants' responses. The scores of the participants' responses ranged from an ordinal value of 1 through 3 for all items, except items 1,6, and 11 which had scores that ranged from 1 to 5. While scoring Subset B, the researcher detected several patterns that aligned with or expanded the findings of the cognitive pre-testing interviews. Similar to the cognitive interviews, the results of piloting Subset B items demonstrated a large percentage of participants who expressed that racial and ethnic diversity were assets for schools. This was especially evident when participants were asked to identify aspects of Ms. Delgado's personal experiences and background that may benefit the Palm Tree Elementary, the school in the narratives. The majority of the respondents discussed how Ms. Delgado's background would benefit parents and students, but only three respondents indicated how her diverse experiences and background would be of benefit to her fellow faculty. Two participants, however, indicated that having similar background as the student may result in lowered expectations.

Another similarity to the findings of the cognitive interview was that some participants expressed that Ms. Gardner, a White woman, would diversify the school and give her students a different perspective. Participants often noted Ms. Gardner's ability to speak Spanish as a strength, and six participants in particular noted her Spanish speaking abilities as a strength for collaboration with parents. There were 11 participants who highlighted the geographical differences between Ms. Gardner's background and that of the other characters of the narratives. Specifically, these participants discussed the terms urban, small towns, and even rural settings. (Two participants state that Ms. Gardner was from a rural community, although the narratives did not use the term rural).

As in the cognitive interviews, participants of the pilot also noted that the differences in the ages and experiences of the collaborating teachers was a potential source of conflict. When it came to Ms. Gardner, seven pilot participants found that they could not identify how her personal and background experiences aligned with the needs of the school and were better able to answer questions about her professional experiences. Some went further and explicitly stated that a teacher like Ms. Gardner would never be able to relate to certain types of students: "One challenge is that Ms. Gardner won't ever fully understand the experiences the students are going through and how they affect their school performance versus how Ms. Delgado understands."

While scoring the responses, the researcher found a relationship between participants' majors and their attitude toward Ms. Gardner's prior teaching experience at a high school. While 18 participants identified Ms. Gardner's professional experience teaching Honors and Advanced Placement (AP) courses as an asset to the school, four special education majors considered that this same background was a potential problem

or challenge to overcome for the fictitious character. Although this relationship was not originally detected in the cognitive pre-testing interviews, the researcher revisited the field notes of the interviews and noticed that one of the cognitive interview participants who was a special education major also pointed to Ms. Gardner background as an AP teacher as a challenge. There were nine participants who explicitly indicated that Ms. Delgado's special education background would be of benefit to the school.

**Deficit thinking and color evasiveness in Subset B: Lack of intersectional competence.** Within the responses of Subset B, there was evidence that some participants held negative attitudes or stereotypes about certain groups or held deficit views that treated differences as something to be repaired. In regards to attitudes about African Americans, the following statements about African Americans were made by three separate participants in response to the items of Narrative A (see Appendix M):

- “The trend that shows in the tables are that apparently having African Americans in Palm Tree is what may be given students doing poorly because of the area and teachers they have.”
- “According to this, apparently just because there are more African Americans the scores have gone down”.
- “Statistically speaking the school's performance is on the decline is because the students are predominantly Black, according to table 1 the school's' population of African American students is 91%”.

As the researcher found in the cognitive interviews, nine pilot participants indicated that the families with low income had less time for their children. One participant, however, also commented on the morals of lower income families:

When a student qualifies for free/reduced lunch, it means he/she comes from a low income family; maybe it's a single-parent household or a family struggling working two jobs. When a student does not have the financial or moral support from the family, he/she tends to do poorly in school.

While there were participants who made stereotypical assertions about markers of difference, other participants took a color-evasive approach and did not recognize the systems of oppression (i.e., racism, classism, sexism) that may pervade a school system. (Note that the researcher uses the term “color-evasive” instead of the more common, but ablest term “colorblind”). In response to whether demographic information may be related to schools’ performance the following responses exemplify a color evasive approach:

The school should be working its hardest to make sure that their students succeed, and I don’t think that the student’s background should affect whether they deserve to succeed. It shouldn’t affect how hard the school works.

and

The demographics are not at all related. I don’t see how economic situation the reason why is in any way related. A child’s economic situation has nothing to do on a standardized test; there are some extremely gifted kids who live in poor areas.

The final questions of Subset B asked participants to opine whether a student should be evaluated for special education services. There were participants who indicated that he should and were able to justify their response, but others were glib about their decision and even stated that the character had “nothing to lose”. One participant

stated that after two years in the U.S. the character should have already mastered the English language.

I would agree that Abner be evaluated for special education services. If Abner had just recently moved to the United States within the past year and was still having trouble learning English. I would give him some more time and try to find a math software program he could complete in his home language. Since his father informed the teachers that the family came to the U.S. two years ago, however, his English should be fairly fluent by now and an evaluation for special education services wouldn't hurt.

The types of answers included in this section are examples of the types of responses a teacher education program should flag when determining whether a preservice teacher is adequately prepared to work with diverse populations, including students with disabilities.

**Factor structure and internal reliability of the ICM.** Using the STATA 13 statistical package, the researcher attempted to apply a CFA to establish the measurement model for the intersectional competence construct. Figure 3 shows the proposed relationship between the latent variables (i.e., the eight indicators of the intersectional construct) represented by ovals and the items corresponding to the eight indicators, which are represented by rectangles (e.g., the construct identification of markers of difference were represented in Subset A item 6, and Subset B items 2 and 4). Figure 4 includes a key that explains the abbreviations presented in Figure 3. Due to the ordered-categorical nature of the items that contribute to this construct, a confirmatory factor model with ordinal indicators, using weighted least squares with adjusted mean and variance

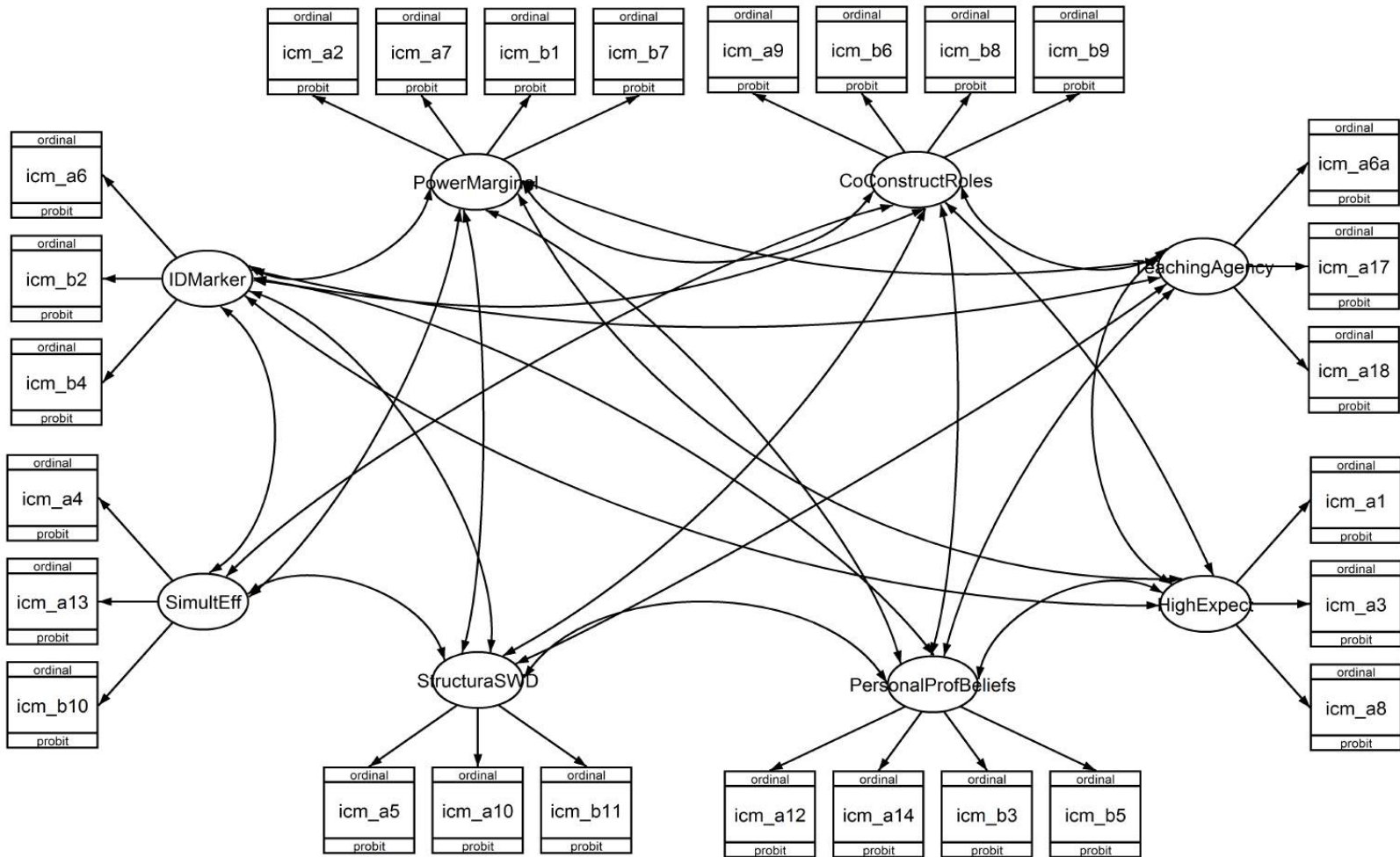


Figure 3. Proposed Model for Confirmatory Factor Analysis

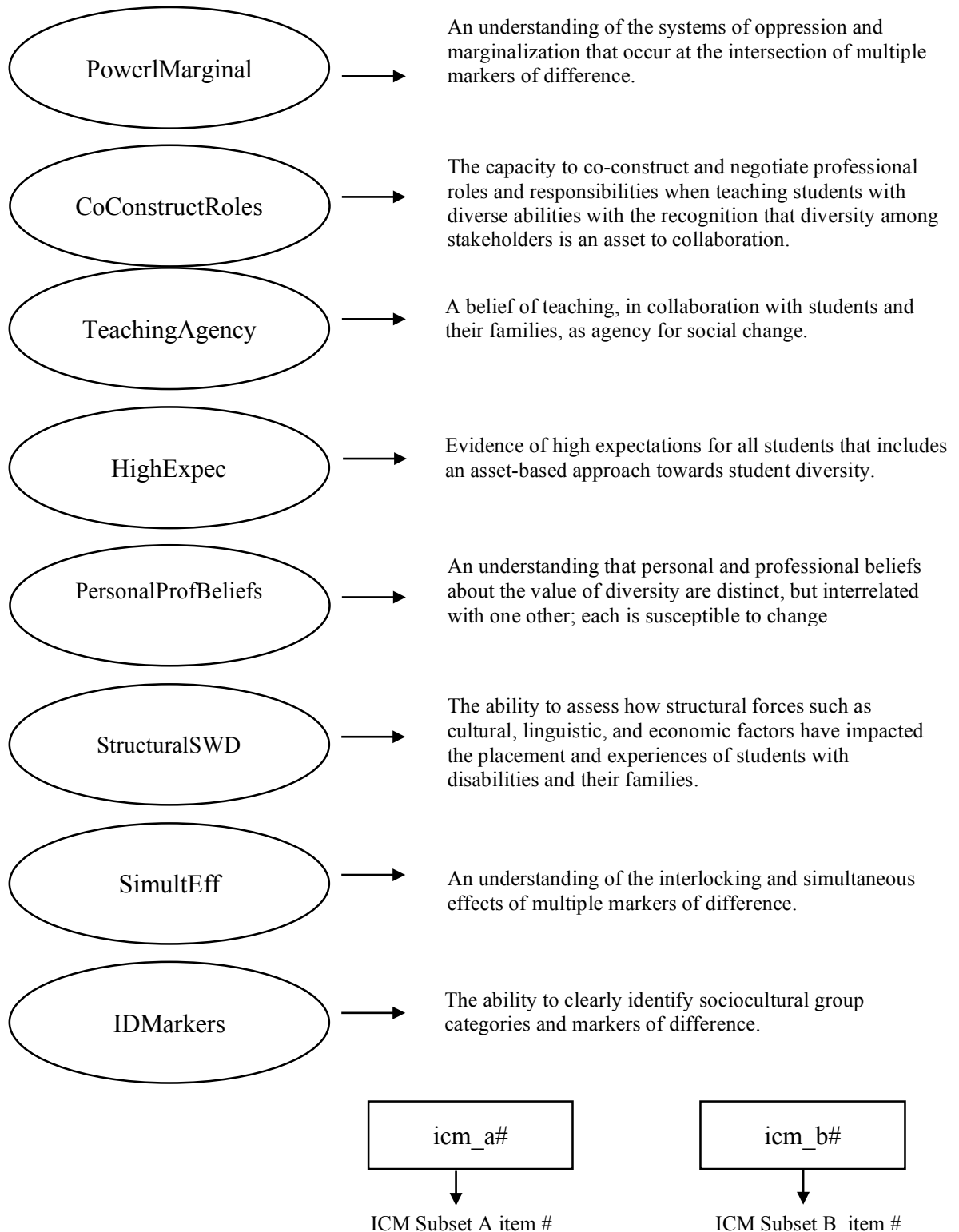


Figure 4. Explanation of Figures and Abbreviations of Proposed Model



estimation was applied. The proposed relationships were based on the results of the qualitative phase of this study. The directionality of the arrows in the figure represent the paths of the relationships. The covariance (which are linked across the eight indicators) are represented by the curved arrows. In other words, the figure shows how the indicators are correlated. With the exception of the Teaching as Agency indicator, each indicator had at least one item from both subsets of the ICM. As per best practice, at least three items were associated for each indicator.

To assess model fit, the researcher attempted to use standard measures such as the model chi-square test ( $\chi^2$ ), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA), with its accompanying 90% confidence interval (Kline, 2011). Although 107 participants took the pilot of the ICM, only 86 persevered to the second subset of items. When, the researcher used STATA 13 model constraint command to conduct pairwise comparisons, the statistical program was unable to complete the task. Considering that six of the indicators are represented by items of both subsets, and all eight indicators are proposed to interrelate with one another, the researcher concluded that a larger sample of participants who complete both subsets of the ICM (i.e., at least 100 participants) will be required to establish the level of fit. A greater sample of participants is needed to test the proposed model without violating statistical assumptions. Once she recruits more participants to complete both subsets of the ICM, the researcher will have sufficient data to examine the residual correlations and modification indices to identify the magnitude of potential sources of indicator misfit.

**Pilot participants' comments about the understandability of Subset A items.**

The participants were asked to provide feedback regarding the understandability of the

items of each subset of the third draft of the ICM. At the end of Subset A, the participants were prompted with the following questions:

After reviewing and answering questions 1-18, were there any questions that were not clear or difficult to understand? If so, indicate the question number(s). Please provide any suggestion you may have to clarify the meaning of the question(s).

Of the 107 participants who answered Subset A, 58 answered the above prompt, thirty-one indicated that they found all questions to be understandable (e.g., “I understood everything completely”, “I found the questions to be perfectly understandable”, and “No problem understanding the questions”); 27 participants indicated that they found one or more items difficult to understand. In Table 13, the participants’ who made comments about the lack of understandability of specific item(s) are provided.

Table 13

*Pilot Participants' Comments about Understandability of Subset A Items*

Subset A Items	Pilot Participant(s) Comments
<p>Item 3            Is the attention that girls receive from teachers in schools comparable to the attention boys receive?</p> <p>girls receive much more negative attention than boys</p> <p>girls receive slightly more negative attention than boys</p> <p>girls receive the same attention as boys</p> <p>girls receive slightly more positive attention than boys</p> <p>girls receive much more positive attention than boys</p>	<p>“What type of attention are we referring to? In the classroom? Playground? Is it positive negative? This question confused me. I answered it using my own experience as a girl in a classroom.”</p> <p>“Question 3 was slightly confusing in how it asked the participant to quantify attention. I think that it is possible to think a particular gender receives both more positive and negative attention than the other.”</p> <p>“I feel like it depends on the teacher. It’s not a general thing.”</p> <p>“The responses for question number 3 weren't very clear, based off my experience as a high school student I can say that girls received both positive and negative attention in class. Negative because I recall clear instances where teachers and staff would flirt with female students inappropriately, and also negative (but positive for the students) because certain teachers would generally give female students better grades. It didn't seem like they did it for creepy purposes but just because they treated women in general differently.”</p>

Table 13

*Pilot Participants' Comments about Understandability of Subset A Items Continued*

Subset A Item	Pilot Participant(s) Comments
<p>Item 4            In the United States, is privilege—or unfair advantages and access to opportunities— associated with the combination of masculinity, White skin, and wealth?</p> <p>not at all associated with that combination            slightly associated with that combination            fairly associated with that combination            quite associated with that combination            extremely associated with that combination</p>	<p>“4, 14, 17”            The participant provided no additional commentary.</p>
<p>Item 7            Can students living in economically isolated neighborhoods benefit socially and academically from economically integrated classrooms?</p> <p>Not benefit at all            Slightly benefit            Fairly benefit            Quite benefit            Extremely benefit</p>	<p>“The question about economically diverse classes integrating into non-economically diverse areas. Is it about bringing urban students/ELL, etc. to the suburbs/affluent areas or vice-versa? That's the spirit in which I answered it.”</p> <p>“One question that was difficult to understand was question 7.”</p> <p>“The one question I had difficulty understanding was number 7. I was not familiar with what "economically integrated" meant.”</p>

Table 13

*Pilot Participants' Comments about Understandability of Subset A Items Continued*

Subset A Item	Pilot Participant(s) Comments
<p>Item 9            Do parents and families possess knowledge and expertise that can increase the educational benefits for students?</p> <p>there are no parents or families who possess knowledge and expertise at all            a slight amount of parents and families possess knowledge and expertise            a fair amount of parents and families possess knowledge and expertise            a great amount of parents and families possess knowledge and expertise            all parents and families possess knowledge and expertise</p>	<p>“I didn't quite understand what the question was asking? What type of expertise are we referring to?”</p> <p>“I believe is not properly asked because I'm not trying to say parents aren't knowledgeable. Obviously sometimes the parent will know better because it's their kid. Yet many times parents can be in denial or simply not care either because of lack of knowledge or something else.</p> <p>“questions 9 and 17 were a little difficult to understand.”</p>

Table 13

*Pilot Participants' Comments about Understandability of Subset A Items Continued*

Subset A Item	Pilot Participant(s) Comments
<p>Item 10            Can teachers' lack of knowledge about racial, ethnic, socioeconomic, and linguistic groups other than their own have a negative impact on the school experiences and academic outcomes of students who are different from the teachers?</p>	<p>“10, 12, 15”            The participant provided no additional commentary.</p>
<p>Item 12            Is examining one’s own attitudes and beliefs about age, disabilities, gender, linguistic origin, race, religion, sexuality, and socioeconomic background an important part of learning to be a teacher?</p>	<p>“10, 12, 15”            The participant provided no additional commentary.</p>
<p>Item 13            Is being responsive to cultural and linguistic needs of students as important as addressing reading or mathematical abilities?            Much less important than addressing reading or...            Slightly less important than addressing reading or...            Just as important as addressing reading or mathematical...            More important than addressing reading or....            A lot more important than addressing reading or mathematical abilities</p>	<p>“13 and 14 were a bit difficult to answer/ understand. Maybe rephrasing number 13”</p>

Table 13

*Pilot Participants' Comments about Understandability of Subset A Items Continued*

Subset A Item	Pilot Participant(s) Comments
<p>Item 14            Do teachers need to consider if they derive any privilege based on their age, gender, disability status, linguistic origin, race, religion, sexuality, and socioeconomic status to be effective teachers?</p>	<p>“4, 14, 17”            The participant provided no additional commentary            “13 and 14 were a bit difficult to answer/ understand. Maybe rephrasing number 13”</p>
<p>No consideration is necessary at all            A little consideration is necessary            Some consideration is necessary            Quite a bit of consideration is necessary            A lot of consideration is necessary</p>	<p>“14, I had to read it several times to fully understand what was being asked.”            “Question 14 was confusing.”            “Question 14 was a little hard to understand. To clarify this question, you could have asked if teachers derive any privileges to the students based on something related to them like if they share the same disability, or if they knew each other from childhood. The question was understandable but a bit confusing how it was worded had to read it twice to see if I was on the same page.”</p>

Table 13

*Pilot Participants' Comments about Understandability of Subset A Items Continued*

Subset A Item	Pilot Participant(s) Comments
<p>Item 15</p> <p>For students who immigrate to the U.S. from countries in which a language other than English is the dominant language, is it more important for students to be fully immersed in English in school than to spend time maintaining and developing their native language proficiency?</p> <p>Much less important than maintaining native...            Slightly less important than maintaining native...            Just as important as maintaining native language            Slightly more important than maintaining native...            A lot more important than maintaining native...</p>	<p>“10, 12, 15”            The participant provided no additional commentary.</p> <p>“Question 15 was a leading question; I felt like it was unclear and trying to trick me to choose politically correct answer.”</p> <p>“I would say question 15 was confusingly worded. I understood it after reading though it a couple of times, but maybe asking if it is the teacher's responsibility to encourage a non-native speaker to keep up with their native language while learning the new language.”</p>



Table 13

*Pilot Participants' Comments about Understandability of Subset A Items Continued*

Subset A Item	Pilot Participant(s) Comments
<p>Item 17            Is helping students question gender role stereotypes when they are evident in instructional materials or within the educational setting part of the responsibilities of the teacher?</p> <p>Not part of teacher responsibilities at all            A small part of teacher responsibilities            Somewhat part of teacher responsibilities            Quite a bit a part of teacher responsibilities            Very much a part of teacher responsibilities</p>	<p>“questions 9 and 17 were a little difficult to understand.”</p> <p>“4, 14, 17”            The participant provided no additional commentary</p> <p>“I don't know how to restate question 17, but it was hard to understand.”</p> <p>“Over all the survey was self-explanatory, the last two questions were difficult to understand.”</p>
<p>Item 18            Is examining one's own attitudes and beliefs about age, disabilities, gender, linguistic origin, race, religion, sexuality, and socioeconomic background an important part of learning to be a teacher?</p>	<p>“Question 18, I personally did not understand the way the question was asked.”</p> <p>“I believe everyone would have a bit of an issue answering that question. Maybe if the question was phrased like ‘What would you do in that situation’ not a multiple-choice question but rather a short-response question.”</p> <p>“Over all the survey was self-explanatory, the last two questions were difficult to understand.”</p>

Table 13

*Pilot Participants' Comments about Understandability of Subset A Items Continued*

Subset A Item	Pilot Participant(s) Comments
General comments about Subset A questions	<p>“Most questions consisted of long sentences. In my case, the length of the sentence confused me a bit, so I had to go back and read again.”</p> <p>“I had to read twice each question to completely understand it. It may be because English is my second language.”</p>
General comments about Subset A questions (continued)	<p>“Try to avoid convoluted language. Otherwise, questions and answers are effective and straightforward.”</p> <p>“Some of the questions were a little bit difficult to understand when I first read them but after going back a couple of times I was able to understand what it was asking and answer the question.”</p> <p>“The questions were overall very well written. The only issue I had was that a couple of questions were not as detailed as the others, which wouldn't have been a problem if it didn't affect the question itself. Though, those couple of questions needed be a tad bit more detailed because they were slightly vague.”</p> <p>“I had to read twice each question to completely understand it. It may be because English is my second language”</p> <p>“Some questions I had trouble answering because [the item] can either correlate strongly or slightly depending on the situation in the classroom. For example, culture can benefit students as well as harm those who feel completely out of place.”</p>

**Overall impression of Subset A.** Of the 107 pilot study participants, 69 provided feedback about their overall impression of Subset A when prompted by the following question: “After reviewing and answering questions 1-18 of Subset A, what is your overall impression of the Intersectional Competence Measure?”

The participants’ reaction to the first half of the ICM were generally positive and ranged in terms of the focus of what they thought about the instrument. Some participants focused on specific markers of differences when responding to this prompt: (e.g., “Interesting questions regarding gender”, “I find it very interesting and a good way to find out if people of all races think alike”, and “I believe it is up to the school systems responsibility to create programs for immigrant students to achieve academic success.”)

Others responded by explaining what they thought the purpose of the instrument was and whether the items accomplished the purpose. For example: “My overall impression was that it adequately posed questions that could definitely be of use to someone trying to determine how diverse a teacher needs to be before entering the classroom”, “Overall, I believe the questions were effective and essential for future teachers to think about and answer”, and “These questions focused on aspects of education that is so often overlooked and underrepresented.” One participant expressed that the items were a way to evaluate her understanding of her coursework at FIU:

I felt that it adequately covered a lot of expectations of teachers as laid out by the code of conduct and targets a few competencies that aren't often covered in classes and I wouldn't have known about before taking EEX3070. As such it seems to measure teacher competence very well.

Other responses acknowledged that the items pushed their thinking about the value of diversity. One pilot participant indicated that “these questions made me realize how important diversity is in the educational field”. Another stated, “My overall impression was that there were a couple of things I did not think of about cultural backgrounds of students in the classroom.” One reflective participant not only explained how the items pushed her thinking, she also considered how her and others’ responses may be related to their personal background and experiences:

Overall, I found the Intersectional Competence Measure to be thought-provoking. While taking the survey I found myself thinking deeply about the questions and reflecting upon my own perspectives. I find that many of the questions can easily lead to dialogue about important and challenging realities that are faced in education. I also found some of the questions to be quite subjective and highly dependent on individual experiences.

Although the overall reaction the Subset A were positive, two participants expressed concern that the items were trying to sway participants to answer in a certain way:

Overall, I understand what the test is asking and evaluating. However even though I am a Hispanic women and I am a feminist, I feel that this test is a little too focused on women and men are negatively represented. I feel that if a guy were to take this exam they would feel like a minority.

and,

Many questions are valid, like questions 6a, 7, 8, 9, 12, 14, but an overlying feeling of pressure to choose an answer that everyone would like is felt. The new

trend socially is to only focus on race and gender, while these topics are extremely important they cannot be the sole focus of a teacher.

Finally, others focused their reactions to Subset A on technical details such as the quality of the writing and their ability to navigate through the items. For example, “Technically speaking, it is very user-friendly”.

**Comments about the understandability of Subset B items.** Of the 86 participants who completed Subsets A and B, 50 respondents provided qualitative feedback about the Subset B narratives after being prompted with the following question:

After reading Narratives A-E, was there any information that was not clear or difficult to understand? If so, indicate the narrative letter(s). Please provide any suggestion you may have to clarify the meaning of the narrative(s).

Of the 50 participants who answered the above prompt, 44 indicated that the narratives were understandable and seven participants provided suggestions about how to improve the understandability or navigability of the Subset B narratives. On a second prompt, the participants were also asked to provide feedback on the questions that accompanying the narratives, only five participants identified ways to improve the questions, while the other respondents explained that the questions were extremely clear. There were far less critiques about the understandability of the items in Subset B than there was with the Subset A items. In Table 14 and 15, the participants’ comments and suggestions for improving Subset B are summarized.

Table 14

*Pilot Participants' Comments about Subset B Narratives*

Comments about the Narratives	
Participant suggestions or critiques	Notes
Perhaps the narratives could be offered on one long page. The only criticism I have would be that it was sometimes difficult to formulate my thoughts while flipping back and forth between narratives and questions.	Navigability of narrative and items format.
When one of the narratives was on a different page than the questions it made it difficult to answer the pertinent questions for that section.	Navigability of narrative and items format.
The narratives were clear and easy to understand. They could vary in length or have a number so that the reader has an idea of how many narratives they have left.	Length of narratives and navigability of Subset B. Best practices, however, indicate that online scales should not indicate how many items the participants has left.
It was a lot of reading but after reading it a couple of times I understood what was needed.	Length of narratives.
I don't know if it's me, but some of the narratives were a little confusing for me to answer, I feel it didn't give enough information, I had to go back and read it over several times.	Difficulty of narratives.
Ms. Gardner should be Mrs. It was stated she was married.	Accuracy of feedback. The narrative, however, did not state that she was married, but that she had a partner.
Narrative A almost forces one to say answer that the administration culturally understands the students while the teachers do not as being the only visible reason the school is not doing	Perceived test biases.

Table 14

*Pilot Participants' Comments about Subset B Narratives Continued*

Comments about the Corresponding Items	
Participant suggestions or critiques	Notes
well. Narrative D makes Ms. Delgado sound whinny in her attempts to verbalize how Ms. Gardner does not value her input. The narrative also makes Gardner seem standoffish and this push to like Delgado from Narrative B is clear and leading. Narrative E is valid, clearly written, and interesting	

Table 15

*Pilot Participants' Comments about Subset B Items*

Comments about the Corresponding Items	
Participant suggestions or critiques	Notes
After reviewing and answering questions 1-11, there was only one question where I was unsure how to respond - question 9. At first I thought the answer to question 9 was to be found in the above narrative because the answers to questions 7 and 8 were found in the narrative. When I didn't find anything from the narrative that pertained to question 9, however, I finally realized the answer was a personal opinion.	Narrative and item fit.
It was odd answering some of the questions when the narrative seemed to be leading in a different direction.	Narrative and item fit.
Too much reading for short answers.	Length of narrative and items fit
The questions were clear but the questions in the first narratives felt redundant. As the survey progressed the questions became easier to answer.	Redundancy and order of items.



**Comments about the ICM as a whole.** Finally, the pilot participants were asked to make comments about the overall experience of taking the ICM. Of the 64 respondents who gave feedback about both subsets, eight expressed that Part B changed their overall impression about the instrument. The responses of the eight participants are included in Figure 5.

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Participants' Comments about the ICM
I prefer Subset B, over subset A. This part was very much about critical thinking and answer depended on me, unlike Subset A where the answer choices were predetermined and somewhat confusing.
I understood the second section better.
Section B was easier to understand.
The multiple choice is much more difficult than the narratives. Overall It was very well put together.
I found Subset B to be quite thorough. At first I thought the Intersectional Competence Measure was a multiple choice survey. However, after going through the narratives and questions I realized the depth of the survey. While reading and answering the questions I felt as though I was engaging in a exciting conversation. I really enjoyed taking it! I think the questions asked were on target and very important ones to ask.
After completing Subset B, I am even more impressed by the Intersectional Competence Measure. All the research and information that has gone into this measure has been thorough and knowledgeable.
Parts of the earlier subset pushed the test taker to like or dislike individuals based on their cultural connection with the community.
After this subset, the Intersectionality of education has extended beyond just personal beliefs. Subset B in particular highlighted how there is a definite intersection between the background of two individuals working together, how they view the field of education, and how they view students in general.

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*Figure 5: Overall Impressions of the ICM Test*

Another response to the above prompt that stood out, was that of a pilot participant who took the opportunity to compare the ICM to the curriculum of her teacher preparation program

This content has been taught to all FIU students, using situational content such as this, in order to teach the importance of cultural awareness and responsiveness.

Almost all of my courses in the Elementary Education Major consisted of this content/theme.

The researcher was surprised to see how Subset A was perceived to be as more challenging than Subset B; this was not a perspective that emerged from the cognitive interviews. However, the quantitative analyses of the expert panel review for the first draft of the ICM, as well as the outcomes of the CFA for the pilot draft of the ICM seem to corroborate the pilot participants' perception that Subset B was less cognitively challenging than Subset A.

### **Summary**

In this chapter, the researcher described the findings of the steps taken during the development of a scale aimed at assessing preservice teachers' intersectional competence. A total of 139 preservice teachers, six expert panel members, a researcher, and a research assistant were involved in this study. Using best practices and rigorous survey design processes grounded in intersectionality theory, the researcher substantiated the theoretical evidence found in the literature concerning the preparation of teachers to work with diverse learners with input from preservice teacher respondents. Analyses of 107 participants across five preservice preparation programs at FIU (Early Childhood Education, Elementary Education, English Education, Exceptional Student Education,

and Music Education) support the quality of the instrument, suggesting that the researcher has adequate evidence of item reliability and measurement invariance for the intersectional competence construct. The third draft of the ICM appears to be a reliable and efficient tool by which a teacher preparation program, such as FIU's School of Education, can assess whether their teachers are adequately competent in meeting the needs of a complex and diverse school population. The qualitative feedback regarding each subset of the third draft of the ICM, as well as feedback about the instrument as a whole, indicate that the ICM, though understandable, will continue to require further development and item refinement.

## **CHAPTER V**

### **DISCUSSION AND CONCLUSIONS**

In this chapter, the researcher discusses the findings of the study. The chapter begins with a summary of the challenges involved in preparing and assessing whether preservice teachers are ready to respond to the needs of diverse student populations, including students with disabilities. The discussion is followed by a review of the purpose of the study. The researcher summarizes and discusses the findings relevant to the two research questions. In addition, the researcher discusses the limitations of the study and describes the implication for teacher educators and teacher preparation programs. The chapter concludes with suggestions for further research.

#### **Summary of the Investigation**

It is critical for teacher educators to identify the most effective ways to prepare general and special education teachers for their work in diverse and inclusive settings. Special education teacher educators are increasingly collaborating with colleagues from other departments. Today, over 60% of P-12 students with disabilities spend 80% or more of their instructional day in the general education setting (Aud et al., 2013). The intersection of disability and other markers of difference is not only of consequence for the preparation of special education teachers but is also of importance for the research, policy, and practices enacted in the preparation of all teachers. There is lack of consensus, however, across teacher education departments regarding how to frame diversity. Special education teacher educators in the U.S. can look to international examples of teacher learning for inclusive practices in order to expand discussions about diversity beyond the focus on students' abilities (Waitoller & Artiles, 2013). Proponents

of cultural responsiveness and multicultural education in teacher education, on the other hand, must be more consistent in including disabilities in discussions and analyses of diversity (Liang & Zhang, 2009; Welch, 1996).

The need for an integrated approach to prepare all teachers for the complexities faced in the P-12 classroom requires the thoughtful cooperation between teacher educators from various communities—for example, bilingual, multicultural, social justice, and special education teacher educators—who would benefit from a shared language concerning meeting the needs of diverse students. While it is important to frame collaborative efforts around students' school-based needs, it is also necessary to recognize that each student is situated within a context that is nested within a family, community, and society at large (Harry, 2008; Kozleski, Artiles, & Skrtic, 2014). School personnel's personal background and identities, which are seldom explored in the special education and collaborative teacher preparation literature (Pugach et al., 2014) also merit attention (Laughter, 2011). Preservice teachers must exit their preparation programs with the ability to collaborate with diverse school personnel, families, and students in order to effectively understand all of the factors that may influence the teaching and learning process.

Recently, there have been efforts to create teacher efficacy and competency measures to determine preservice teachers' readiness to instruct diverse students. The efficacy and competency measures, for the most part, focus on disability separate from cultural diversity and are self-reported measures. As researchers across teacher education communities are recognizing that markers of diversity can no longer be examined through unitary approaches that privileges one marker of students' identities (e.g.,

disability status) over others (e.g., race, ethnicity, gender), the need for an overriding conceptual framework and shared language has become more pressing. Intersectionality theory can advance an understanding of the gap created by the lack of comprehensive treatment of diversity across departments within teacher preparation programs (Grant & Zwier, 2011). In this study, the researcher examined the theoretical and empirical evidence for validating the ICM. A mixed-methods sequential exploratory design was applied to develop and validate an instrument intended to measure preservice teachers' readiness to address the increasingly complex needs of a diverse student population.

The purpose of this study was to identify indicators that best capture intersectional competence and to develop and validate an instrument that uses these indicators to measure preservice teachers' intersectional competence. The instrument included two subsets of items. Subset A is a survey designed for preservice teachers to self-report their intersectional competence and Subset B is a case-based measure of preservice teachers' intersectional competence that will be completed by preservice teachers. The literature review and focus groups informed the development of the first draft of the ICM. The synthesis of the experts' feedback informed the second draft of the instrument. The feedback from the cognitive interviews informed the development of the third draft of the ICM which was administered as a pilot to a group of preservice teachers.

### **Research Question 1: Indicators of Intersectional Competence**

The researcher identified eight preliminary indicators of the intersectional competence construct after reviewing the literature that examined intersectionality and special education, collaborative teacher education, and assessments of preservice teachers' understanding of diversity. The items developed to measure intersectional

competence were validated through the feedback and consensus of expert panel members who validated both the self-reported items (i.e., Subset A) and a case-based measure of preservice teachers' intersectional competence (i.e., Subset B). Finally, the eight preliminary indicators of the intersectional competence measure were confirmed by 32 preservice teachers, 12 of which were special education majors, during the focus group and cognitive interview stages of the qualitative phase. At the conclusion of the qualitative phase of the study, the eight preliminary indicators were upheld. After synthesizing the literature review and triangulating the focus group sessions responses, expert panel review, and cognitive interviews, the researcher recognized the need to expand the definition of the indicators. The researcher expanded the final language of the eight indicators to explicitly state that the intersectional competence construct involves an understanding of diversity as an asset when it comes to collaborating with different stakeholders and meeting the needs of diverse learners.

The ICM builds on existing measures such as the LTSJ- B (Enterline et al., 2008) and other diversity scales that address beliefs and competencies related to diverse learners, including individuals with disabilities (Liang & Zhang, 2008; McCall et al., 2014; Pohan & Aguilar, 2012). Furthermore, the indicators of the ICM also incorporates concepts that emerged from the extant literature on cooperative general education and special education teacher preparation (Pugach et al., 2014) and the assessment of special education teacher preparation (McCall et al., 2014). Throughout all of the stages of the qualitative phase of the study, general education and special education preservice teachers were able to recognize and discuss—with varying abilities across participants—the complexities of intersecting sociocultural categories and the pedagogical and

collaborative skills necessary to respond to multiple and intersecting diversities. The indicators of the intersectional competence construct, therefore, emphasize an understanding of the systems of oppression and marginalization that occur at the intersection of multiple markers of difference and procedural knowledge (e.g., the ability to co-construct and negotiate professional roles and responsibilities with diverse stakeholders) that have yet to be captured in prior measures.

**Research Question 2: Establishing the Validity and Reliability Estimates of the ICM**

The validity of the ICM indicators and items were established across theoretical and quantitative terms. For example, during each stage of the qualitative phase, the researcher shared her findings with the respective participants. Whether it was through member-checking with pre-service teachers, creating summary reports for the expert panel, or providing initial and follow up trainings with the research assistant, the design of this study built in several mechanisms to establish the accuracy (i.e., the theoretical validity) of the ICM. The researcher applied numerous procedures to establish the reliability and consistency of the ICM results. During the quantitative phase prior to scoring participants' responses to Subset B and creating a proposed model for a CFA, the researcher established the inter-rater reliability of the scoring guide. For each item, participants gave a range of possible answer choices, which in combination with the standard deviations, suggest the scale captured sufficient variation between respondents.

The pilot test participants found Subset A to be more challenging than Subset B a perspective that emerged from the cognitive interviews. The quantitative analyses of the expert panel review for the first draft of the ICM for the final draft of the ICM seem to



corroborate the pilot participants' perception that Subset B was less cognitively challenging than Subset A. Of those who began the pilot, 107 participants completed Subset A, while 86 participants answered items in both Subsets A and B. In future iterations of the ICM, Subset B will be presented before Subset A to promote greater perseverance and the completion of both subsets. Although a preliminary model was constructed to demonstrate the interrelated relationship between the items and indicators, further piloting of the instrument with  $n > 100$  participants who complete both subsets of the ICM is required to adequately substantiate a CFA model fit.

### **Limitations**

The findings include substantial evidence of validity for the ICM. Establishing validity, however, is an ongoing process with many considerations such as the population for which the instrument is valid and the purpose of the instrument. Unfortunately, because the present study did not have a nationally representative sample, the researcher cannot generalize the results to the broader U.S. population of preservice teachers. The target population for the ICM is preservice teachers who are in general and/or special education teacher preparation programs. The research sample population is a subset of the target population. That is, the focus group sessions that informed the first draft of the ICM, in addition to the cognitive interviews and piloting of the instrument that informed subsequent revisions, each involved participants who were predominately of diverse cultural and linguistic backgrounds and who attended a Hispanic Serving Institution. This presents a limitation to this study, as the teacher workforce in the U.S. is not as diverse as the participants included in the study. While the majority of teachers in the U.S. are White women, only 17 preservice teacher participants self-identified as White. In future

efforts to validate this instrument, cross population validation with larger samples (with  $n > 200$ ) can be done to strengthen the overall validity of the instrument.

### **Limitation or Unique Opportunity?**

The demographics of the participants, a limitation, may also be seen as a unique advantage to the study. “For intersectional theorists, marginalized subjects have an epistemic advantage, a particular perspective that scholars should consider, if not adopt, when crafting a normative vision of a just society” (Nash, 2008, p. 3). During the focus groups and, to a lesser extent, the cognitive interview sessions, participants would often refer to their own sociocultural markers and markers of difference when answering the interview questions. The majority of participants were Hispanic women, and Spanish was the primary language spoken for many in their childhood home. For example, in all three focus group sessions, there was at least one participant who responded using Spanish. Nevertheless, intersection of sociocultural markers such as skin color and accents with ethnic identity also emerged when examining the responses with the Hispanic participants.

Although there was more racial, ethnic, and linguistic diversity in the participants of this study, there was no representation of Asian or African American/Black male in the study. Furthermore, self-identification of a marker of difference did not guarantee intersectional competence. This was especially evident across all three focus groups discussions about attitude toward Asian and Asian Americans. In one focus group, a general education major who self-identified as Hispanic discussed how Indian and Asian students “always received the most awards” during her time at school, which was

followed up by the following response from a White, general education preservice teacher:

That's an actual thing. There is something called the Asian advantage which in the end, the ones who are coming out ahead are people from India, or from Southeast Asia. They are getting paid even more than White male Americans, which has always been like the top group. This is something that you can see in Sociology books and it's something that's not very known.

The topic of the “Asian advantage” or model minority is hotly contested among scholars (Kao, 1995; Lee, 1996; Nakanishi & Yamano, 2014), some of who argue that the mystification of Asian students’ academic success understates the racism and marginalization Asian and Asian American students often experience. For example, a special education major who self-identified as Asian discussed how she is often questioned about her background:

If I’m meeting somebody for the first time or I’m working with someone in a group project or something like that they automatically assume like I’m from somewhere like you know exotic place. Like I have gotten like, are you from Ethiopia you have some facial... I don’t know. I’m just like... I don’t like when people start guessing where I’m from because it’s like I’m not from there, I was born here you know? It’s kind of like ... uh! You know... like people give me all these different places from all around the world and I’m just like whoa. So it’s uncomfortable.

As evidenced by this and other participant responses, at times, the idea of who is American was treated synonymously with Whiteness. Therefore, for this group of racially

and ethnically diverse preservice teachers, the term “American” was often juxtaposed and contrasted to being members of racial and ethnic minority groups. One participant who self-identified as Hispanic and was born in the U.S. shared, “I didn’t think myself as an American until my mom started saying ‘we are American’ even though she is not very American”.

Another student who self-identified as Asian discussed the criminalization of people from her native country:

Like for my country also, they expose things about my country like being a terrorist. That’s the only thing that’s happening there? It's there and people are living there. So they are living there because there is something good going on there, right?

A fellow focus group member responded with, “it's true because to be honest, when I think about that, that’s literally the first thing... that comes to my mind”. This same participant who was worried about the perception of her native country as one filled with terrorists also discussed the pressure she puts on herself so that others can have a better perspective of her:

I really try and give my best because I don’t want to be labeled as a person from a country who has been into different, weird things. So I want to prove myself that I am also from [Asian country] and I can...

The ethnic, racial, and linguistic diversity present in the participants throughout two phases—a limitation to this study—also presents an important opportunity to take a closer look at the intragroup differences within these markers of differences and the intersectionality that exists within pan-ethnic categories used such as Hispanic and Asian.

### **Lack of convergent and divergent validity evidence.**

A second limitation of this study is the lack of validity evidence based on the intersectional competence construct in relation to other similar constructs that would have establish the convergent and divergent validity. The present study is missing this evidence source due to the nonexistence of a criterion measure to provide adequate comparisons. No other existing measure includes an indicator that accounts for the simultaneous effects of multiple markers of difference or provides sufficient attention about the intersecting identities of preservice teachers and school professionals. The generalization inference in the validity argument would be better supported if there was evidence based on relationships with other variables that addresses questions about the degree to which the relationships between the eight indicators are consistent with the construct underlying the ICM.

### **Implications for Teacher Preparation**

The intersectionality competence construct, and its measurement through the ICM, can advance an understanding of the gap created by the lack of a comprehensive treatment of diversity in teacher preparation research and practice. Intersectionality is a frame that explores the complexities of the interactions of markers of difference. It can inform collaborative efforts with diverse stakeholders and facilitate teacher educators who are endeavoring to enhance preservice teachers' understanding of diverse learners. For example, during a cognitive interview a participant who is a general education preservice teacher admitted that she was initially did not want to work with students with disabilities until she took an inclusive practices course and learned about differentiated instruction and Universal Design for Learning. She shared that what she liked about the

ICM was that it connected the ideas that she was learning about responding to cultural and linguistic diversity with the ideas about inclusive practices and education for all. Where general education preservice teachers may be apprehensive about working with students with disabilities, learning about disability as another type of difference may be a pedagogical tool that may help bridge the gap between special education and general education teacher preparation.

Intersectionality framing has potential for helping general and special education pre-service teachers understand their roles in relations to the wide, and often interconnecting, diversity of the students and families they will work with. Although the demographics of teachers and preservice teachers continue to be predominately White and female (Aud et al., 2013; Ingersoll et al., 2014; Kozleski et al., 2014) preservice teachers may also work with colleagues whose cultural background or gender differs from that of their own (Lee & Hemer-Patnode, 2010; Sleeter, 2001). Laughter (2011) argued that there are other markers of identity, such as religion, class, gender, and geographical location, which intersect and influence the way White preservice teachers view teaching and learning. Regardless of the racial composition of a school's faculty and staff, it is instructive to acknowledge one of the assumptions of intersectionality: "each category of differences has within group (as well as individual) diversity that influences the dynamics, as well as the outcomes of intervention" (Garcia & Ortiz, 2013, p.35). The ICM provides a tool for teacher educators and preservice teachers to understand the experiences of diverse colleagues and partners, as well as help educators bring each other's experiential knowledge base as an asset to collaborative efforts.

The ICM will help teacher educators determine the extent to which their teacher candidates are prepared to work with students who experience the effects of multiple sociocultural markers. Teacher educators can design course and program activities that enhance their preservice teachers' intersectional competence. When preparing teacher candidates, intersectionality helps to frame an understanding of how systems of privilege and oppression have developed, and how schools are implicated in these interlocking systems. Participants within the focus groups and cognitive interviews frequently referred to the role that teacher preparation courses and field experiences play in preparing teachers to implement culturally responsive and inclusive teaching practices. Furthermore, the participants of this study indicated that teaching as advocacy and for social change also requires a huge respect for the teaching profession and teacher preparation. These findings are of consequence to those who would like to recruit and retain teachers in schools that traditionally have high turnover rates (Ingersoll et al., 2014; Kozleski, et al. 2014). While the researcher initially used terms like "civil rights" to discuss equity in the earliest manifestation of the intersectional competence indicators, participants preferred the term "social justice". This finding aligns with the Quartz and TEP Research Group's (2003) conclusion that when it comes to preparing and supporting urban educators, an emphasis on social justice and teacher agency is essential for novice teachers to effectively navigate the multiplicative challenges of working in urban schools.

### **Implications for Future Research**

This study is significant because intersectionality holds potential for the development of preservice teachers' understanding of diversity and the intersectional

competence construct can guide collaborative efforts with diverse stakeholders. Information garnered from the literature review and focus group sessions informed the language used in the first draft of ICM. The instrument will provide an additional evaluative tool for teacher educators and researchers to assess the readiness of preservice teachers to work with diverse colleagues, students, and families.

The next step for the development will be to pilot the instrument across the U.S. and to include a sample population of participants that is representative of the nation's teacher preparation programs. In addition to piloting the instrument with more preservice teachers, the researcher also suggests further development and validation of the ICM items for in-service teachers and in-service teacher preparation programs.

Finally, this study contributes to the current dialogue, within and outside of education, concerning how to research intersectionality. By establishing the theoretical basis for the validity of an instrument that measures intersectional competence, this study will provide those who examine intersectionality an example of how to take intersectionality from a theoretical frame to empirical and practical applications.

### **Conclusion**

Although the demographics of teachers and preservice teachers continue to be predominately White and female (Aud et al., 2013; Ingersoll, Merrill & Stuckey, 2014; Kozleski et al., 2014) preservice teachers will engage with students and families who are not White and may also work with colleagues whose cultural background or gender differs from that of their own (Lee & Hemer-Patnode, 2010). Laughter (2011) argued that there are other markers of identity, such as religion, class, and geographical origins, which intersect and influence the way White preservice teachers view teaching and



learning. Regardless of the racial composition of a school's faculty and staff, it is instructive to acknowledge one of the assumptions of intersectionality that "each category of differences has within group (as well as individual) diversity that influences the dynamics, as well as the outcomes of intervention" (Garcia & Ortiz, 2013, p.35). The ICM provides a tool for teacher educators and preservice teachers to understand the experiences of diverse colleagues and partners, as well as help educators bring each other's experiential knowledge base as an asset to collaborative efforts.

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## Appendix A

### FOCUS GROUP

#### FACILITATOR DISCUSSION GUIDE

The following 10 questions will be asked during the course of each focus group session. Each question may be followed up with additional questions in order to encourage participants to elaborate.

1. What comes to mind when you hear the word "diversity"?
  - a. What comes to mind when you hear the word "inclusion"?
2. What are some labels that are often used to categorize students in schools?  
(e.g., labels: race, gender, ethnicity, gifted, sped, esol, ses)
3. Are there categories that seem more favorable than others?  
(e.g., within race, gender, etc.)
4. What are examples of students who fit into more than one category?
5. How are the categories used in schools similar to those used in other institutions (or outside of school)? How are they different?
6. What steps can a teacher take when working with diverse students?  
(Facilitator will follow up with diverse families and diverse colleagues).
7. Besides the students' abilities, are there any other factors that may come into play when placing a student in special education? If so, what are they?
8. How have your personal values played a role in your school experience?  
  
Has there been a time when what was expected from you at school clashed with your personal values? If so, describe that time.
9. To what extent do you agree that all students can learn?
10. Are there any labels or categories that make you feel proud? uncomfortable?  
  
How do you feel when someone gives you a label that you don't identify for yourself?



Appendix B

**What was the primary language spoken in your childhood home?**

English

Spanish

French/Creole

Other (please specify) \_\_\_\_\_

**In approximately how many of the courses that you have taken was teaching students with disabilities included in the syllabus?**

None

1 to 2

2 to 4

4 or more

Not sure

**In approximately how many of the courses that you have taken was teaching culturally or linguistically diverse students included in the syllabus?**

None

1 to 2

2 to 4

4 or more

Not sure

**Are you willing to be contacted for a follow up interview about today's focus group?**

Yes

No

## Appendix C

### Expert Panel Review Instructions

Thank you once again for agreeing to participate in the expert review of the items on the *Intersectional Competence Measure (ICM)*. Below are descriptions of the research project, the construct definition, and a list of questions about each of the items of the *ICM*. Please begin by familiarizing yourself with the background information and the construct definitions, and then review the specific instructions for completing the content validation.

#### **I. Research Project:**

**Purpose:** The purpose of this study is to identify the indicators that best capture intersectional competence and to develop and validate an instrument that uses these indicators to measure preservice teachers' intersectional competence. The instrument will include two subsets of items. Subset A will be a survey designed for preservice teachers to self-report their intersectional competence and Subset B will be a case-based measure of preservice teachers' intersectional competence that will be completed by preservice teachers. A mixed-methods sequential exploratory design is being applied to develop and validate the instrument. Prior to developing the first draft of the *ICM*, a literature review and three focus group sessions were conducted for the purpose of identifying and refining the indicators of the intersectional competence construct. In the qualitative phase, the researcher has and will be collecting data that strengthens the theoretical basis for validating the instrument (i.e., interviews with focus groups, consulting with experts, and cognitive interviewing). The second stage of the study will involve the quantitative analysis of the results of pilot testing the items in subsets A and B.

**Background:** Recently, there have been efforts to create teacher efficacy and competency measures to determine preservice teachers' readiness to instruct diverse students. The efficacy and competency measures, for the most part, focus on disability separate from cultural diversity and are self-reported measures. Intersectionality can advance an understanding of the gap created by the lack of an integrated treatment of diversity in teacher preparation research. Intersectionality is a frame that explores the complexities of the interactions of multiple markers of difference. It holds great potential as a concept for preservice teachers' understanding of diversity because it can inform collaborative efforts with diverse stakeholders and facilitate preservice teachers' understanding of diverse learners.

**Participants and target respondent population:** The target population for the *ICM* is preservice teachers who are in general and/or special education teacher

preparation programs. The research sample population is a subset of the target population. That is, the focus group sessions that informed the first draft of the *ICM*, in addition to the cognitive interviews and piloting of the instrument that will take place after the expert panel review, each involve participants who are of diverse cultural and linguistic backgrounds and attend a Hispanic Serving Institution. The participants of this study are the portion of the population that the researcher can reasonably access. In future efforts to validate this instrument, cross population validation can be done to strengthen the overall validity of the instrument.

## **II. Construct Definition:**

The researcher uses the term “intersectional competence” to describe preservice teachers’ understanding of diversity and how students, families, and colleagues have multiple sociocultural markers that intersect in nuanced and unique ways. In this study, the researcher drew from the literature on intersectionality in special education, the research on collaborative teacher preparation, and existing diversity measures to identify preliminary indicators of the intersectional competence construct. The eight preliminary indicators of intersectional competence that emerged from the literature review and focus group sessions were:

1. the ability to clearly identify sociocultural group categories and markers of difference;
2. an understanding of the interlocking and simultaneous effects of multiple markers of difference;
3. an understanding of the systems of oppression and marginalization that occur at the intersection of multiple markers of difference;
4. the capacity to co-construct and negotiate professional roles and responsibilities when teaching students with diverse abilities;
5. the ability to assess how structural forces such as cultural, linguistic, and economic factors have impacted the placement and experiences of students with disabilities and their families;
6. an understanding that personal and professional beliefs about diversity are distinct, but interrelated with one another; each is susceptible to change;
7. a belief of teaching as agency for social change; and
8. evidence of high expectations for all students.

For the sake of expediency, the pool of items in the draft of Subset A are organized by these eight indicators (see PDF documents included with Expert Review Instructions). In the piloting of the *ICM*, the items will not be grouped in this fashion. The draft of Subset B includes notes and comments that signal the intended indicators for the items (see PDF document).

### III. Expert Panel Review

#### A. Directions for Subset A

In this section, the reviewer will rate how comprehensible each item is along four dimensions: (1) whether the item is understandable, (2) how the item could be clarified, (3) the anticipated mode of response by preservice teachers, and (4) the relevance of each item to the intersectional competence construct of interest. Please review as shown in the **following examples** for each dimension:

- (1) Rate how **understandable** each item is by using the scale below. Type in an “X” for your response.

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i> X
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- (2) If you have ideas for how to **clarify the meaning** of an item, please note your thoughts beneath the item.

<i>Ideas for how to clarify meaning:</i> Change the word x to y
--

- (3) For each item, type in what you think the **mode of response** will be given the target respondent population; that is, the response you predict that preservice teachers will select most often.

<i>Anticipated mode response:</i> Not beneficial at all
--

- (4) Rate **how central each item is to the intersectional competence construct** as defined for this instrument. Type in an “X” for your response.

<i>Not at all relevant</i>	<i>Slightly Relevant</i>	<i>Somewhat relevant</i> X	<i>Quite relevant</i>	<i>Extremely relevant</i>
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**B. Subset A Review**

**Item 1**

Would students and teachers benefit from having an understanding of different (diverse) cultures, disability categories, ethnicities, races, and religions?

- Not benefit at all
- Slightly benefit
- Fairly benefit
- Quite benefit
- Extremely benefit

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 2**

Are people with disabilities adequately represented in most textbooks and classroom materials today?

- Not adequately represented at all
- Slightly represented
- Fairly represented
- Quite represented
- Extremely represented

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 3**

Is the attention that girls receive in school comparable to the attention boys receive? Girls receive

- much less attention than boys
- slightly less attention than boys
- the same attention as boys
- slightly more attention than boys
- a lot more attention than boy

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 4**

How accurate is the following statement: Only teachers who are prejudiced or racist need to learn about diversity because effective teachers treat all students the same.

- Not accurate at all
- Slightly accurate
- Fairly accurate
- Quite accurate
- Extremely accurate

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 5**

How accurate is the following statement: Only schools serving students of color need a racially, ethnically, linguistically, and culturally diverse staff and faculty.

- Not accurate at all
- Slightly accurate
- Fairly accurate
- Quite accurate
- Extremely accurate

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 6**

In the United States, is privilege (or advantages in life outcomes) often associated with the combination of masculinity, White skin, and wealth? Privilege is

- not at all associated with that combination
- slightly associated with that combination
- fairly associated with that combination
- quite associated with that combination
- extremely associated with that combination

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 7**

How accurate is the following statement: Many women in our society continue to live in poverty because males still dominate most of the major social systems in the U.S.

- Not accurate at all
- Slightly accurate
- Fairly accurate
- Quite accurate
- Extremely accurate

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 8**

Generally, do school personnel place students who come from culturally and linguistically diverse backgrounds improperly in special education classes? Students who come from culturally and linguistically diverse backgrounds are

- not at all improperly placed in special education
- slightly improperly placed in special education
- fairly improperly placed in special education
- quite often improperly placed in special education
- extremely often improperly placed in special education



<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 9**

How accurate is the following statement: If culturally and/or linguistically diverse students are placed in special education and start to receive services, their teachers no longer need to consider their cultural or linguistic educational needs.

- Not accurate at all
- Slightly accurate
- Fairly accurate
- Quite accurate
- Extremely accurate

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 10**

How accurate is the following statement: People live in poverty because they lack motivation to get themselves out of poverty.

- Not accurate at all
- Slightly accurate
- Fairly accurate
- Quite accurate
- Extremely accurate

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 11**

Is making all public facilities accessible to people with physical disabilities (for example, making wheelchair accessible restrooms) too costly?

- Not costly at all
- Slightly costly
- Fairly costly
- Quite costly
- Extremely costly

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 12**

Do men deserve higher wages than women since men are frequently considered “the heads of households”? Men

- do not deserve higher wages at all
- deserve slightly higher wages than women do
- deserve fairly higher wages than women do
- deserve quite higher wages than woman do
- deserve extremely higher wages than woman do

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 13**

Are people with physical disabilities less effective leaders than people without physical disabilities? People with physical disabilities are

- much less effective leaders
- slightly less effective leaders
- just as effective leaders
- slightly more effective leaders
- a lot more effective leaders

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 14**

Can students living in economically isolated neighborhoods benefit socially and academically from economically integrated classrooms?

- Not benefit at all
- Slightly benefit
- Fairly benefit
- Quite benefit
- Extremely benefit

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 15**

Are teachers expected to adjust their preferred mode of instruction to accommodate the needs of all students?

- Not expected at all
- Rarely expected
- Sometimes expected
- Often expected
- Always expected

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 16**

Do parents and families possess knowledge and expertise that can increase the educational benefits for students? Parents and families possess

- no knowledge and expertise at all
- a little knowledge and expertise
- some knowledge and expertise
- quite a bit of knowledge and expertise
- a great amount of knowledge and expertise

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 17**

In a co-teaching, collaborative teaching model, is the special education teacher expected to share responsibility with the general education teacher for all students in the classroom?

- Never expected to share responsibility for all students
- Rarely expected to share responsibility for all students
- Sometimes expected to share responsibility for all students
- Often expected to share responsibility for all students
- Always expected to share responsibility for all student

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 18**

Can teachers' lack of knowledge of culturally and linguistically diverse backgrounds than their own negatively impact students' learning experiences?

- Not impact at all
- Slightly impact
- Fairly impact
- Quite impact
- Extremely impact

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 19**

Is the traditional classroom set up to support the middle-class lifestyle?

- Not set up to support the middle-class lifestyle at all
- Slightly set up to support middle-class lifestyle
- Fairly set up to support middle-class lifestyle
- Quite set up to support middle-class lifestyle
- Extremely set up to support middle-class lifestyle

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 20**

Is whether students succeed in school dependent primarily on how hard they work?

- Not dependent at all
- Slightly dependent
- Fairly dependent
- Quite dependent
- Extremely dependent

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 21**

Is being responsive to cultural and linguistic academic needs of students as important as addressing reading or mathematical abilities? Responding to cultural and linguistic needs is

- much less important than addressing reading or mathematical abilities
- slightly less important than addressing reading or mathematical abilities
- just as important as addressing reading or mathematical abilities
- slightly more important than addressing reading or mathematical abilities
- a lot more important than addressing reading or mathematical abilities

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 22**

Is examining one's own attitudes and beliefs about disabilities, gender, linguistic origin, race, and socioeconomic background an important part of learning to be a teacher? It is

- not important to examine one's own attitudes at all
- slightly important to examine one's own attitudes
- fairly important to examine one's own attitudes
- quite important to examine one's own attitudes
- extremely important to examine one's own attitudes

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 23**

Do teachers need to consider the advantages or disadvantages they have experienced in life because of gender, linguistic origin, race, and socioeconomic status?

- No consideration is necessary at all
- A little consideration is necessary
- Some consideration is necessary
- Quite a bit of consideration is necessary
- A lot of consideration is necessary

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 24**

Is it more important that students who are immigrants from non-English speaking countries learn English than to maintain and develop their native language proficiency? Learning English is

- much less important than maintaining and developing native language proficiency
- slightly less important than maintaining and developing native language proficiency
- just as important as maintaining and developing native language proficiency
- slightly more important than maintaining and developing native language proficiency



a lot more important than maintaining and developing native language proficiency

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 25**

In general, do White people place a higher value on education than do Blacks/African Americans? White people place

- much less value on education than Blacks/African Americans
- slightly less value on education than Blacks/African Americans
- just as much value on education than Blacks/African Americans
- slightly more value on education than Blacks/African Americans
- a lot more value on education than Blacks/African Americans

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 26**

Is addressing gender role stereotypes when they occur in instructional material or in the educational setting part of the responsibilities of the teacher?

- Not part of teacher responsibilities at all
- Slightly part of teacher responsibilities
- Somewhat part of teacher responsibilities
- Quite a part of teacher responsibilities
- Very much a part of teacher responsibilities

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 27**

Generally, should teachers group students of the same ability levels together?  
Teachers should

- Never group students by ability levels
- Rarely group students by ability level
- Sometimes group students by ability level
- Often group students by ability level
- Always group students by ability level

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 28**

Is challenging school arrangements, practices, and/or policies that maintain societal inequities part of the responsibilities of the teacher?

- Not part of teacher responsibilities at all
- Slightly part of teacher responsibilities
- Somewhat part of teacher responsibilities
- Quite a part of teacher responsibilities
- Very much a part of teacher responsibilities

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 29**

How accurate is the following statement: Although teachers may appreciate diversity within their classrooms, it is not their job to change society.

- Not accurate at all
- Slightly accurate
- Fairly accurate
- Quite accurate
- Extremely accurate

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 30**

Is student achievement related to the teacher's academic expectations?

- Not related at all
- Slightly related
- Fairly related
- Quite related
- Extremely related

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 31**

Is it reasonable for teachers to have lower academic expectations for students who do not speak English as their first language?

- Not reasonable at all
- Slightly reasonable
- Fairly reasonable
- Quite reasonable
- Extremely reasonable

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mode response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**C. Directions for Subset B**

Subset B includes a total of five narratives with corresponding multiple choice and open-response items that follow the narratives. In this section, the reviewer will rate how comprehensible each narrative, item, and scoring guide is in Subset B (see PDF document of draft of Subset B).

**Narrative Instructions:** For each narrative, the reviewer will rate how comprehensible the information presented is along two dimensions: (1) whether the narrative is understandable, and (2) how the narrative could be clarified. Please review as shown in the **following examples** for each dimension:

- (1) Rate how **understandable** each of the following narratives is by using the scale below.  
Type in an “X” for your response.

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i> X
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- (2) If you have ideas for how to **clarify the meaning** of a narrative please note your thoughts beneath the item.

<i>Ideas for how to clarify meaning:</i> The narrative could have specified the student’s grade level.
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**Multiple Choice Instructions:** For each multiple choice item, the reviewer will rate how comprehensible each item is along four dimensions: (1) whether the item is understandable, (2) how the item could be clarified, (3) the anticipated mode of response by preservice teachers, and (4) the relevance of each item to the intersectional competence construct of interest. Please review as shown in the **following examples** for each dimension:

- (1) Rate how **understandable** each item is by using the scale below. Type in an “X” for your response.

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i> X
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- (2) If you have ideas for how to **clarify the meaning** of an item, please note your thoughts beneath the item.

*Ideas for how to clarify meaning:*

Change the word x to y

- (3) For each item, type in what you think the **mode of response** will be given the target respondent population; that is, the response you predict that preservice teachers will select most often.

*Anticipated mode response:*

Not beneficial at all

- (4) Rate **how central each item is to the intersectional competence construct** as defined for this instrument. Type in an “X” for your response.

<i>Not at all relevant</i>	<i>Slightly Relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>
		X		

**Open-Response Instructions:** For each open response item, the reviewer will rate how comprehensible the item and scoring guide is along four dimensions: (1) whether the item is understandable, (2) how the item could be clarified, (3) the anticipated mode score, and (4) the relevance of each item to the intersectional competence construct of interest. Please review as shown in the **following examples** for each dimension:

- (1) Rate how **understandable** each of the following item and scorer’s guide is by using the scale below. Type in an “X” for your response.

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
				X

- (2) If you have ideas for how to **clarify the meaning** of the item and scorer’s guide please note your thoughts beneath.

*Ideas for how to clarify meaning:*  
The scorer's guide needs to be more aligned to the item...

- (3) For each open-response question, **type in what you think the mode score** will be given the target respondent population; that is, the score you predict that preservice teachers will earn most often.

*Anticipated mode score:*  
4

- (4) Rate **how central each item is to the intersectional competence construct** of interest.  
Type in an "X" for your response.

<i>Not at all relevant</i>	<i>Slightly Relevant</i>	<i>Somewhat relevant</i> X	<i>Quite relevant</i>	<i>Extremely relevant</i>
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**D. Subset B Review**

**Narrative A:** How comprehensible is the information presented in Narrative A (pp. 1-2)?

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify the scenario:</i>				

**Item 1**

After completing your teacher education program, if you were assigned to work at Palm Tree Elementary School, what role(s) would you be most prepared to serve?

(Check all that apply).

Early Childhood/Lower Elementary (i.e., PK, 1<sup>st</sup> or 2<sup>nd</sup> grade)

Upper Elementary (i.e., 3<sup>rd</sup>, 4<sup>th</sup>, or 5<sup>th</sup> grade)

Special Education  
 Gifted Education  
 English Language Learner/English for Speakers of Other Languages  
 I would not be eligible to serve in any capacity at Palm Tree Elementary

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mean response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 2**

To what extent is the percentage of English Language Learners at Palm Tree Elementary comparable to that of the district? The percentage of English Language Learners is:

- extremely lower than the district
- slightly lower than the district
- about the same as the district
- slightly higher than the district
- extremely higher than the district

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mean response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>



**Item 3**

To what extent is the percentage of students eligible for free and reduced lunch at Palm Tree Elementary comparable to that of the state? The percentage of students eligible is:

- extremely lower than the state
- slightly lower than the state
- about the same as the state
- slightly higher than the state
- extremely higher than the state

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mean response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 4**

To what extent is the percentage of racial/ethnic diversity of the teachers and administrators at Palm Tree Elementary comparable to that of the United States? The faculty at Palm Tree Elementary is:

- much less diverse than the U.S.
- slightly less diverse than the U.S.
- approximately as diverse as the U.S.
- slightly more diverse than the U.S.
- extremely more diverse than the U.S.

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mean response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 5**

Do you believe that the school’s demographic composition (such as the percentage of students eligible for free and reduced lunch or the percentage of Black/African American students) is related to the schools performance on the state assessments? The school’s demographic composition is:

- not at all related to the school’s performance on the state assessment
- slightly related to the school’s performance on the state assessment
- somewhat related to the school’s performance on the state assessment
- quite related to the school’s performance on the state assessment
- extremely related to the school’s performance on the state assessment

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mean response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 6**

Use what you have learned in courses and field experience, as well as the I information presented in Narrative A, to explain your answer to item 5.

1 Response is simply a restatement of belief without further explanation.	2 Response briefly connects stated belief with <b>one</b> of the following: <ul style="list-style-type: none"> <li>• demographic information of PTE</li> <li>• demographic information of district, state, or U.S.,</li> <li>or</li> <li>• performance indicators of Palm Tree Elementary</li> </ul>	3 Response briefly connects stated belief with <b>two</b> of the following: <ul style="list-style-type: none"> <li>• demographic information of PTE</li> <li>• demographic information of district, state, or U.S.</li> <li>or</li> <li>• performance indicators of Palm Tree Elementary</li> </ul>	4 Response adequately connects stated belief with <b>three</b> of the following: <ul style="list-style-type: none"> <li>• demographic information of PTE</li> <li>• demographic information of district, state, or U.S.</li> <li><b>and</b></li> <li>• performance indicators of Palm Tree Elementary</li> </ul>	5 Response connects <b>in detail</b> stated belief with: <ul style="list-style-type: none"> <li>• course work and field experience, demographic</li> <li>• demographic information of PTE</li> <li>• demographic information of district, state, or U.S.</li> <li><b>and</b></li> <li>• performance indicators of Palm Tree Elementary</li> </ul>
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<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mean score:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Narrative B:** How comprehensible is the information presented in Narrative B (p. 5)?

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify the scenario:</i>				

**Item 7**

What are **at least two** features of Ms. Delgado’s personal experiences and/or background that would be an asset to the faculty, students, and families of Palm Tree Elementary? Explain why and be as specific as possible.

Scorer’s guide:

1 Response does not identify a benefit or asset. Does not include any information from the narrative.	2 Response identifies benefit(s) to PTE but does not explicitly connect to Ms. Delgado’s personal experiences and/or background.	3 Response identifies one benefit to PTE and one feature from Ms. Delgado’s background. The connection between benefit and background is vague.	4 Response identifies one to two benefits to PTE and somewhat connects benefits to features from Ms. Delgado’s background.	5 Response identifies <b>two</b> or more features of Ms. Delgado’s background and clearly <b>connects each feature to a benefit</b> to PTE.
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<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mean score:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 8**

What is **at least one** feature of Ms. Delgado’s professional training and experiences that would be an asset to the faculty, students, and families of Palm Tree Elementary? Explain why and be as specific as possible.

Scorer’s guide:

1 Response does not identify a benefit or asset. Does not include any information from the narrative.	2 Response identifies a benefit <i>or</i> one feature of Ms. Delgado’s professional training & experiences. Does not identify one of each. Does not make connections between each.	3 Response identifies one benefit to PTE and one feature from Ms. Delgado’s professional experiences/training. The connection between feature and professional experiences/training is vague.	4 Response identifies one benefit to PTE and somewhat connects to Ms. Delgado’s professional experiences/training.	5 Response identifies <b>one</b> or more features of Ms. Delgado’s professional training/experiences and clearly <b>connects feature(s) to at least one benefit</b> to PTE.
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<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mean score:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 9**

Based on your courses and field hours with cooperating teachers, is Ms. Delgado’s belief that teaching is a profession that improves the opportunities available for others accurate?

- Teachers do not make a difference at all.
- Teachers slightly make a difference.
- Teachers somewhat make a difference.
- Teachers make quite a difference.
- Teachers make an extreme difference.

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mean response:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Narrative C:** How comprehensible is the information presented in Narrative C (p. 7)?

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify the scenario:</i>				

**Item 10**

What are **at least two** features of Ms. Gardner’s personal experiences and/or background that would be an asset to the faculty, students, and families of Palm Tree Elementary? Explain why the features you identified are assets. Be as specific as possible.

1 Response does not identify a perceived benefit or asset. Does not include any information from the narrative.	2 Response identifies benefit(s) to PTE but does not explicitly connect to Gardner's personal experiences and/or background.	3 Response identifies one benefit to PTE and one feature from Ms. Gardner's background. The connection between benefit and background is vague.	4 Response identifies one to two benefits to PTE and somewhat connects benefits to features from Ms. Gardner's background.	5 Response identifies <b>two</b> or more features of Ms. Gardner's background and clearly <b>connects each feature to a benefit</b> for PTE.
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<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mean score:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 11**

What is at least one feature of Ms. Gardner's professional training and experiences that would be an asset to the faculty, students, and families of Palm Tree Elementary? Explain why the feature you identified is an asset. Be as specific as possible.

1 Response does not identify a benefit or asset. Does not include any information from the narrative.	2 Response identifies a benefit <i>or</i> one feature of Ms. Gardner's professional training & experiences . Does not identify one of each. Does not make connections between each.	3 Response identifies one benefit to PTE and one feature from Ms. Gardner's professional experiences/training . The connection between feature and professional experiences/training is vague.	4 Response identifies one benefit to PTE and somewhat connects to Ms. Gardner's professional experiences/training .	5 Response identifies <b>one</b> or more features of Ms. Gardner's professional training/experiences and clearly <b>connects feature(s) to at least one benefit</b> to PTE.
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<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mean score:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 12**

Ms. Delgado and Ms. Gardner are colleagues who collaborate on a daily basis. After reading about their respective backgrounds,

what are **two** potential benefits (that is, for students, families, and each other) of their collaborative efforts?

What is **one** potential challenge?

1 Response does not identify any benefits or any challenge. Does not include any information from the narrative.	2 Response identifies a benefit <i>or</i> challenge of collaboration. Does not identify one of each. Does not make any mention of the teacher's background.	3 Response identifies at least one benefit and one challenge of collaboration. A vague attempt is made to connect at least one aspect of either teacher's backgrounds to benefits or challenge.	4 Response identifies <b>two</b> benefits of collaboration and <b>one</b> challenge. Response briefly mentions at least one aspect of either teacher's background to explain the benefits <b>or</b> challenges of collaboration.	5 Response identifies <b>two</b> benefits of collaboration and <b>one</b> challenge. Response includes at least one feature of each teacher's background to explain the benefits <b>and</b> challenges of collaboration.
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<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mean score:</i>				

<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>
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**Item 13**

What are **three** skills or strategies that the teachers will need to enact in order to have a successful partnership?

1 Response does not identify any skills or strategies.	2 Response identifies one skill or strategy.	3 Response identifies two skills or strategies.	4 Response identifies three skills or strategies.	5 Response identifies three skills or strategies that teachers enact, including communication of teachers' personal and professional backgrounds.
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<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mean score:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Narrative D:** How comprehensible is the information presented in Narrative D (p. 9)?

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify the scenario:</i>				



**Item 14**

What, according to Ms. Delgado, was **one** challenge involved with collaborating with Ms. Gardner?

1 Response does not include the challenges that either teacher describes in the narrative.	2 Response describes one challenge from one of the two teachers' perspectives.	3 Response describes one challenge from each of the teachers' perspectives, for a total of two challenges.	4 Response describes one challenge that each teacher identified, for a total of two challenges. Response somewhat includes words and phrases from the narrative.	5 Response clearly describes one challenge that each teacher identified, for a total of two challenges. For each teacher, response includes words and phrases directly from the narrative.
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<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mean score:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 15**

In your own words, what are **at least two** other factors that may have contributed to the challenges they faced?

1 Response does not describe other factors that may have contributed to challenges. Respondent does not use own words.	2 Response describes one possible factor that contributed to challenges. Response drawn solely from Narrative D.	3 Response describes two possible factors that contributed to challenges. Response includes respondents' own words, but drawn mainly from Narrative D.	4 Response includes two factors. Response somewhat draws inferences from this and at least one other narratives (A-C). Includes respondents' own words.	5 Response includes two factors. Clearly draws inferences from this and at least one other narratives (A-C). Indicates how differences in teachers' sociocultural markers (e.g., age, ethnicity) and experiences
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				associated with those markers may lead to possible misunderstanding;
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<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mean score:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Narrative E:** How comprehensible is the information presented in Narrative E (p. 11)?

<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify the scenario:</i>				

**Item 16**

Palm Tree Elementary has a school wide, multi-tiered approach to student intervention referred to as Response to Intervention or RtI. From the scenario presented above, provide **at least one** example of evidence that Ms. Delgado and Ms. Gardner implemented a system of instruction and interventions driven by student outcomes.

1 Response does not provide example that demonstrate teachers implemented multi-tiered system.	2 Response includes an example of teachers' practice. Slightly demonstrates understanding of multi-tiered approach to	3 Response includes an example of teachers' practice. Somewhat demonstrates understanding of multi-tiered	4 Response includes an example of teachers' practice and provides evidence from narrative. Demonstrates	5 Response includes <b>one or more</b> example(s) of teachers' practice and provides evidence from narrative.
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	student intervention.	approach to student intervention.	understanding of multi-tiered approach to student intervention.	Clearly demonstrates understanding of multi-tiered approach to student intervention. ;
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<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mean score:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 17**

What other factor(s), besides Abner’s mathematical abilities, may be impacting his understanding of the interventions provided by his teachers? Identify **at least one** and be as specific as possible.

1 Response does not provide example of other factors that may be influencing student’s responsiveness to intervention.	2 Response includes an example of other factor; however, not substantiated by information included in narrative.	3 Response includes an example of factors that is somewhat substantiated by information included in narrative.	4 Response includes an example of factors and provides clear evidence from narrative (e.g., teachers not providing interventions in student’s non-native language; demographic disparities between student and teachers).	5 Response includes <b>one or more</b> example(s) of factors and provides evidence from narrative (e.g., teachers not providing interventions in student’s non-native language; demographic disparities between student and teachers). Clearly demonstrates how teachers lack of linguistic and cultural considerations
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				factor into Abner's lack of responsiveness to intervention.
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<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mean score:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**Item 18**

Should Abner be evaluated for special education service? Explain why or why not. Be as specific as possible.

1 Response is simply a restatement of belief without further explanation.	2 Response includes an attempt to connect stated belief with one of the following:  <ul style="list-style-type: none"> <li>• RtI and responsiveness to intervention</li> <li>• Abner's cultural and linguistic needs</li> </ul> or <ul style="list-style-type: none"> <li>• Abner's performance in mathematics</li> </ul>	3 Response connects stated belief with one of the following:  <ul style="list-style-type: none"> <li>• RtI and responsiveness to intervention</li> <li>• Abner's cultural and linguistic needs</li> </ul> or <ul style="list-style-type: none"> <li>• Abner's performance in mathematics</li> </ul>	4 Response clearly connects belief with one or more of the following:  <ul style="list-style-type: none"> <li>• RtI and responsiveness to intervention</li> <li>• Abner's cultural and linguistic needs</li> </ul> or <ul style="list-style-type: none"> <li>• Abner's performance in mathematics</li> </ul>	5 Response connects <b>in detail</b> stated belief with one or more of the following:  <ul style="list-style-type: none"> <li>• RtI and responsiveness to intervention</li> <li>• Abner's cultural and linguistic needs</li> </ul> or <ul style="list-style-type: none"> <li>• Abner's performance in mathematics</li> </ul>
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<i>Not at all understandable</i>	<i>Slightly understandable</i>	<i>Somewhat understandable</i>	<i>Quite understandable</i>	<i>Extremely understandable</i>
<i>Ideas for how to clarify meaning:</i>				
<i>Anticipated mean score:</i>				
<i>Not at all relevant</i>	<i>Slightly relevant</i>	<i>Somewhat relevant</i>	<i>Quite relevant</i>	<i>Extremely relevant</i>

**V:**

**Overall Impression of *Intersectional Competence Measure***

Next, please think about all the items as a whole for a moment. Does this survey scale fairly represent the intersectional competence construct without ignoring important features of the construct? Please indicate any aspects or characteristics that you feel are important parts of this construct that are not represented or are inadequately represented by the **two subset survey scales** (Subset A and Subset B).

1.

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2.

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3.

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Thank you!

## Appendix D

### Synthesis of Expert Panel

Sent to Expert Panel Members via e-mail on November 3, 2015:

The Intersectional Competence Measure (ICM) is intended to measure preservice teachers' intersectional competence, that is, their understanding of diversity and how students, families, and colleagues have multiple sociocultural markers that intersect in nuanced and unique ways.

Before developing the items included in the first draft of the ICM, I reviewed the literature and conducted a focus group with preservice teachers in order to identify indicators that capture the construct. The eight preliminary indicators of intersectional competence were:

1. the ability to clearly identify sociocultural group categories and markers of difference;
2. an understanding of the interlocking and simultaneous effects of multiple markers of difference;
3. an understanding of the systems of oppression and marginalization that occur at the intersection of multiple markers of difference;
4. the capacity to co-construct and negotiate professional roles and responsibilities when teaching students with diverse abilities;
5. the ability to assess how structural forces such as cultural, linguistic, and economic factors have impacted the placement and experiences of students with disabilities and their families;
6. an understanding that personal and professional beliefs about diversity are distinct, but interrelated with one other; each is susceptible to change;
7. a belief of teaching as agency for social change; and
8. evidence of high expectations for all students.

Originally, 10 potential expert panel members were contacted and nine agreed to participate in the study. A total of seven expert panel members provided feedback on the

ICM; six expert panel members completed the panel review per the instructions given. Below is a brief synthesis of the six expert panel responses.

### **Assessment of Preliminary Indicators**

In order to assess the extent to which the expert panel agreed that the preliminary indicators capture the construct, I examined (a) the average relevance of items and (b) the overall comments about the instrument.

In Subset A, the two indicators with the highest average relevance were the ability to assess how “structural forces such as cultural, linguistic, and economic factors have impacted the placement and experiences of students with disabilities and their families” and “an understanding that personal and professional beliefs about diversity are distinct, but interrelated with one other; each is susceptible to change”. Similarly, in Subset B, items 17 and 18 had the highest average relevance and measured how “structural forces such as cultural, linguistic, and economic factors have impacted the placement and experiences of students with disabilities and their families”. Three expert panel members indicated that although the items focused on understanding teachers’ identities were relevant, more emphasis should be placed on the intersectionality of students and families.

Items that measured “the ability to clearly identify sociocultural group categories and markers of difference” in Subset A were deemed relevant, but four expert panel members asked why markers of difference such as ability, sexual orientation, and religious affiliation were not included in the questions. As a result of these comments, the next draft of items will be revised to be more inclusive of these markers of difference. In Subset B, there was consensus among all expert panel members that items 1-4 were

not relevant to the intersectional competence construct; these items will not be included in subsequent revisions of the ICM. Furthermore, one panel member noted that too many items focused on identifying markers of difference and not enough items included example of “interlocking and simultaneous effects of markers of difference”.

In Subset A, the indicator with the lowest average relevance was “an understanding of the systems of oppression and marginalization that occur at the intersection of multiple markers of difference”. In Subset B, however, items 5-6 (which also captured this indicator) had a relatively high average relevance. Expert D critiqued that the items in the instrument tended to focus more on individual’s experiences instead of on institutional factors and social arrangements. Expert E noted that regarding structural forces:

“Some of this might be implied, but not addressed head on. For example, the item about ‘free lunch’ (proximal indicator of poverty) in Narrative A is probably intended to elicit respondent’s understanding about ways in which inequality is structured into the school experienced. In my view, a more direct approach to assessing teacher candidates’ understanding of structured inequalities would be more productive.”

After reviewing the item questions and the expert panel comments, it is evident that the questions I developed in Subset A were not a fit with the description of the “understanding of the systems of oppression...” indicator. In other words, the indicator as described above captures a facet of intersectional competence but the items do not; items 10, 11, and 13 of Subset A will not be included in subsequent drafts of the instrument because they do not adequately address “systems of oppression and



marginalization”. Items 12 and 14 in Subset A and the narratives in Subset B will be revised to adequately represent the indicator.

Although the eight preliminary indicators held up after expert panel review, numerous items will require editing in order to better capture their associated indicators and the overall construct. As Expert F described:

“it’s less that the factors might not be represented and more that some of the questions might not get at the factors adequately.”

Similarly, Expert C stated that “some of the items/questions do not seem directly focused on the construct being assessed”. For example, most expert panel members found that the items that addressed RTI went beyond the focus of the intersectional competence construct. Expert A said that the “final narrative appears to emphasize RTI over intersectionality”. Expert E suggested that the definition of intersectional competence – understanding of diversity and how students, families, and colleagues have multiple sociocultural markers that intersect in nuanced and unique ways– may need to be expanded because the collection of indicators “seem to extend beyond the definition provided”.

### **Anticipated Responses**

The expert panel members were asked to predict anticipated mode responses. The purpose of anticipating responses is for the instrument designer to eliminate items that will not produce an adequate range of means during data analysis. Two expert panel members expressed concerns about the lack of description/guidance regarding what stage the hypothetical respondents were within their teacher preparation program. Expert E

pointed out that I should be cautious when interpreting expert panel members' anticipated mode responses due to the lack of standardization of the anticipated target audience.

Several items did not have a range of anticipated responses. These items (Subset A: items 12, 13; Subset B: item 9) will not be included in subsequent revisions of the ICM. One panel member critiqued item 1 of Subset A because "it's a 'gimme' question—not at all subtle so I think there won't be any spread in the responses". The expert panel members' anticipated mode response for item 1, however, ranged from fairly benefit to extremely benefit. I will keep the item, but revise the language per Expert F's concern.

Expert B brought up the problem of social desirability bias that also came up during the focus group sessions with preservice teachers. As one college junior put it, "millennials are really good at saying the right thing". One of the reasons that a case based assessment (Subset B) was created for this instrument was to elicit responses that go beyond participants' self-reported beliefs. In a comment about an open response question, however, Expert F wrote:

This could be a question/response that has to do with whether the respondent knows how to answer the question well and writes well more than the responses reflecting a belief about assets. A good writer could answer this without deep conviction about the issues.

Once the item pool is selected and questions revised, there are other best practices in survey and instrument design (e.g., forced-choice items, the randomized response technique, the bogus pipeline, self-administration of the questionnaire) that can be

employed in order to minimize this bias. I will consider these concerns in revising and disseminating the survey.

### **Clarification of Meaning and Understandability**

The expert panel members were very generous in providing feedback about the wording, format, and understandability of each item. I will review the comments and suggestions made about clarification of meaning in order to revise the questions, response anchors, narratives, and rubrics of the ICM. Summaries of the expert panel members' comments are included in the following reports:

- **Summary Expert Panel Subset A** - a PDF file that includes each item, graphical representations of the descriptive statistics for each item, and expert comments.
- **Summary Expert Panel Subset B** - a PDF file that includes the descriptive statistics and expert comments for each narrative and item.
- **Summary of Overall Impressions** is a PDF file that includes a table with each panel member's comments about the instrument as a whole.

### **Next Steps: Cognitive Interview and Piloting of the ICM**

The sequential phases that characterize the methodological approach of this study will produce successive sources of validity evidence that will inform each subsequent data collection step. The next stage of development after the expert panel review involves sharing the revised draft of the ICM with 20 preservice teachers in a procedure called "cognitive interviewing". During cognitive interviewing participants will be asked to rephrase each question in their own words. After the cognitive interviews (and third revision of the ICM), the instrument will be ready for piloting. The emphasis on validity

during each step of development should ultimately produce an efficient, valid instrument with acceptable standards of validity and reliability estimates for measuring preservice teachers' intersectional competence.

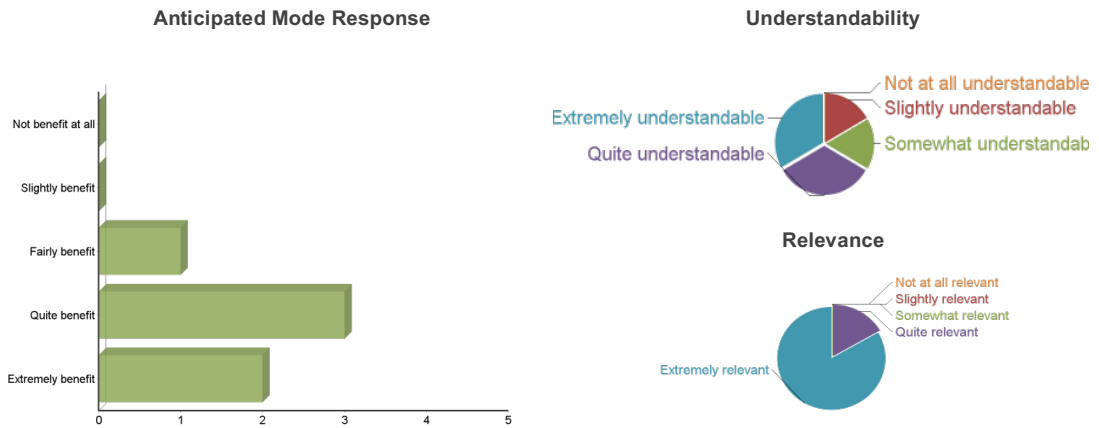
## Appendix E

### Summary Report of Expert Review Subset A

Image of Page 1 of PDF Sent to Expert Panel Members via e-mail on November 3, 2015:

**Item 1- Would students and teachers benefit from having an understanding of different (diverse) cultures, disability categories, ethnicities, races, and religions?**

**Not benefit at all**  
**Slightly benefit**  
**Fairly benefit**  
**Quite benefit**  
**Extremely benefit**



#### Expert Panel Member Comments

A- The question is very understandable, but it may be clearer in the responses if the item was changed to "Would it be beneficial for students and teachers to have a basic understanding..." Then the responses should be changed for clarity. For example, "Not benefit at all" could be changed to "Not beneficial at all." Also, I'm not sure you need to write "different (diverse)"; why not just "diverse"?

B- Would you want to add sexual orientation or gender and socioeconomic status (SES)?

C- No change

D-

E- Not benefit at all  
 Benefit slightly  
 Benefit moderately  
 Benefit substantially  
 Benefit extremely  
 I use a pragmatic view of culture, which means the way life is organized within a community, with an understanding that within any community there will be variation and that cultural patterns are constantly changing. From this perspective, I find your use of "culture" in this item confusing. I would reword the item as follows: Would students benefit from having teachers who understand the influence of race, ethnicity, socio-economic background, language group, disability categories, and religion on a person's life?  
 QUESTION: On what basis are you including religion here but excluding other salient social categories, such as sexual preference? Anticipated mode response: Fairly benefit  
 COMMENT: When determining what a preservice teachers' response will be to this and other items in this instrument, I am assuming that the response is from an average preservice teacher at the completion of his/her teacher education program.

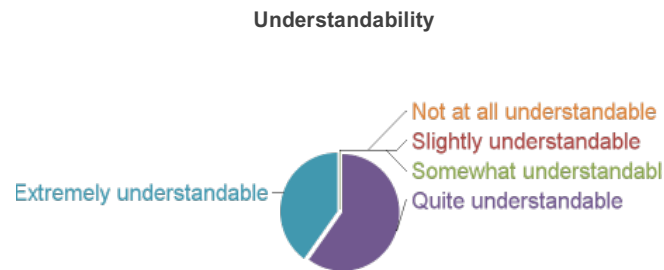
F- The meaning is clear. What concerns me is that it's a "gimme" question—not at all subtle so I think there won't be any spread in the responses. Also, this involves students and teachers, but if the project is about teachers, I'm not sure why students are also included in this specific question.

## Appendix F

### Summary Report of Expert Review Subset B

Image of Pages 1 of PDF Sent to Expert Panel Members via e-mail on November 3, 2015:

**Narrative A: How comprehensible is the information presented in Narrative B (p. 1-2)?**



#### Expert Panel Member Comments

A- Generally very clear. A couple minor suggestions. In paragraph two, last sentence, change to “gifted and talented” (more familiar term). I also bristled slightly at the last phrase of the paragraph, “...which typically have some of the school’s most engaged families.” This could use clarification, since other students’ families may be engaged in ways not recognized or promoted by teachers. In paragraph three, provide wording for PK and omit “subtly.”

B- You may need to situate the school in it’s current neighborhood. Is the school in an economically disadvantaged neighborhood?

C- Scenario is clear

D- The scenario could use of data on students’ gender and other structural factors related to the lost of enrollment (e.g., gentrification, demolition of public housing). Also data about school resources compare to other school in the city or adjacent districts.

E- I would have liked an explanation of what specifically you intend to assess about interactional competence through the use of this narrative. Since that was not totally clear to me, I’m finding it difficult to provide feedback. As I indicated above, the text was quite understandable. But I was fuzzy on the assessment intent. Narrative needs editing for language.

F-

## Appendix G

### Overall Impression of ICM

Image of Pages 1 of PDF Sent to Expert Panel Members via e-mail on November 3, 2015:

**Next, please think about all the items as a whole for a moment. Does this survey scale fairly represent the intersectional competence construct without ignoring important features of the construct? Please indicate any aspects or characteristics that you feel are important parts of this construct that are not represented or are inadequately represented by the two subset survey scales (Subset A and Subset B).**

#### Expert Panel Member Comments

A- This is a wonderful project with great potential for furthering the research on intersectionality and disability. I particularly appreciate the two very different modes of data collection.

Subset A: I'm not a methodologist. Still, I feel that consistency in item construction is important. Some of your items are questions, whereas others are statements. I completely defer to the methodologist you're working with, but I think it might be better to have all items rewritten as statements with consistent response types getting at the degree of agreement the respondent has with each statement. I also was curious about how you arrived at the 8 subcategories of questions. Finally, in the high expectations section, I'd be curious about responses to an item directed at parents/families' expectations.

Subset B: This is a wonderful tool, and I'm very curious about the results you receive, and particularly how they might differ from those in the more straightforward survey in Subset A. Questions 2-4 in this subset were a little confusing to me. As opposed to other areas of the surveys that address teacher beliefs, these items seemed to be assessing teachers' ability to interpret the table. Item 5 is much more in line with the intersectionality focus. Also, item 1 seems out of place. If you're including it as a way of getting demographic information about the respondents, you could do that in a more neutral way with a few questions about their preparation and background (which you should definitely add). I really like the sections for eliciting open-ended responses, too. The final narrative appears to emphasize RTI over intersectionality. Perhaps you're positing that RTI/MTSS represent methods for addressing inequity along the lines of race/ethnicity, social class, and gender in special education? I'd be interested to discuss this more.

- B- 1. My only concern is with the issue of social desirability as preservice participants respond to your questions. Many of the questions are "loaded" for answering in a socially desirable way. Have you considered adding a measure of social desirability?
- Examples: Marlowe-Crowne measure of social desirability (1961); or Multicultural Social Desirability Scale (Sodowsky et al., 1998; 1994).
  - Marlow, D., & Crowne, D. (1961). Social desirability and response to perceived situational demands. *Journal of Consulting Psychology, 25*(2), 109-115.
  - Sodowsky, G., Kuo-Jackson, P. Y., Richardson, M., & Corey, A. (1998). Correlates of self-reported multicultural competencies: Counselor multicultural social desirability, race, social inadequacy, locus of control racial ideology, and multicultural training. *Journal of Counseling Psychology, 45*(3), 256-264. doi:10.1037/0022-0167.45.3.25
  - Sodowsky, G. R., Taffe, R. C., Gutkin, T. B., & Wise, S. L. (1994). Development of the Multicultural Counseling Inventory: A self-report measure of multicultural competencies. *Journal of Counseling Psychology, 41*(2), 137- 148.
2. You do not address the issue of sexual orientation. It may be too much to include in your study.
3. None of the scenarios or Subset A items address the issue of religion. Again, if this is beyond the scope of your study, you may need to revise question 1 in subset A.

C- My comments are related to the measure as a whole... I think there are some instances where people are asked to judge "what is" rather than their own beliefs – this might confound what the measure is getting at. In addition, some of the items/questions do not seem directly focused on the construct being assessed – for example perceptions about general instructional practice rather than beliefs/views about intersectional competence

## Appendix H

### Scoring Guide Subset B

#### Question 1

What information, trends, or statistics identified in Narrative A --including Table 1 and Table 2 -- do you believe are related to the school's performance on the state assessments? Explain why the information, trends, or statistics you identified are important to take into consideration.

<p>1 Response is statement of belief without further explanation.</p>	<p>2 Response <b>briefly</b> connects stated belief with <b>one</b> of the following:</p> <ul style="list-style-type: none"> <li>• demographic information of PTE</li> <li>• demographic information of district, state, or U.S.,</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>• performance indicators of Palm Tree Elementary</li> </ul>	<p>3 Response <b>vaguely</b> connects stated belief with <b>two</b> of the following:</p> <ul style="list-style-type: none"> <li>• demographic information of PTE</li> <li>• demographic information of district, state, or U.S.</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>• performance indicators of Palm Tree Elementary</li> </ul>	<p>4 Response <b>clearly</b> connects stated belief with <b>two</b> of the following:</p> <ul style="list-style-type: none"> <li>• demographic information of PTE</li> <li>• demographic information of district, state, or U.S.</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>• performance indicators of Palm Tree Elementary</li> </ul>	<p>5 Response connects <b>in detail</b> stated belief with two of the following:</p> <ul style="list-style-type: none"> <li>• demographic information of PTE</li> <li>• demographic information of district, state, or U.S.</li> </ul> <p><b>or</b></p> <ul style="list-style-type: none"> <li>• performance indicators of Palm Tree Elementary</li> </ul>
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A score of 5:

would give attention to the extent to which respondent understood the many inequalities that are **structured into the system** which may contribute to students' test scores—such as, biased curriculum, lack of school resources, teachers who lack the preparation for teaching students in the gen ed. setting, etc.



Question 2: What are **at least two** features of Ms. Delgado’s *personal* experiences and/or background that would be an asset to the faculty, students, and families of Palm Tree Elementary? Explain why and be as specific as possible.

<p>1 Response does not identify a benefit or asset. Does not include any information from the narrative.</p>		<p>2 Response identifies one benefit to PTE and one feature from Ms. Delgado’s background. The connection between benefit and background is vague.</p>		<p>3 Response identifies <b>two</b> or more features of Ms. Delgado’s background and clearly <b>connects each feature to a benefit</b> to PTE.</p>
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Question 3

What is **at least one** feature of Ms. Delgado’s *professional* training and experiences that would be an asset to the faculty, students, and families of Palm Tree Elementary? Explain why and be as specific as possible.

<p>1 Response does not identify a benefit or asset. Does not include any information from the narrative.</p>		<p>2 Response identifies one benefit to PTE and one aspect of Ms. Delgado’s professional experiences/training. The connection between feature and professional experiences/training is vague.</p>		<p>3 Response identifies <b>one</b> or more features of Ms. Delgado’s professional training/experiences and clearly <b>connects feature(s) to at least one benefit</b> to PTE.</p>
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Question 4

What are **at least two** features of Ms. Gardner’s *personal* experiences and/or background that would be an asset to the faculty, students, and families of Palm Tree Elementary? Explain why the features you identified are assets. Be as specific as possible.

<p>1 Response does not identify a perceived benefit or asset. Does not include any information from the narrative.</p>		<p>2 Response identifies one benefit to PTE and one feature from Ms. Gardner’s background. The connection between benefit and background is vague.</p>		<p>3 Response identifies <b>two</b> or more features of Ms. Gardner’s background and clearly <b>connects each feature to a benefit</b> for PTE.</p>
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Question 5

What is **at least one** feature of Ms. Gardner’s *professional* training and experiences that would be an asset to the faculty, students, and families of Palm Tree Elementary? Explain why the feature you identified is an asset. Be as specific as possible.

<p>1 Response does not identify a benefit or asset. Does not include any information from the narrative.</p>		<p>2 Response identifies one benefit to PTE and one feature from Ms. Gardner’s professional experiences/training. The connection between feature and professional experiences/training is vague.</p>		<p>3 Response identifies <b>one</b> or more features of Ms. Gardner’s professional training/experiences and clearly <b>connects feature(s) to at least one benefit</b> to PTE.</p>
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Question 6

Ms. Delgado and Ms. Gardner are colleagues who collaborate on a daily basis. After reading about their respective backgrounds,

what are **two** potential benefits, (that is, for students, families, and each other) of their collaborative efforts?

What is **one** potential challenge?

<p>1 Response does not identify any benefits or any challenge. Does not include any information from the narrative.</p>	<p>2 Response identifies a benefit <i>or</i> challenge of collaboration. Does not identify one of each. Does not make any mention of the teacher's background.</p>	<p>3 Response identifies at least one benefit and one challenge of collaboration. A vague attempt is made to connect at least one aspect of either teacher's backgrounds to benefits or challenge.</p>	<p>4 Response identifies <b>two</b> benefits of collaboration and <b>one</b> challenge. Response briefly mentions at least one aspect of either teacher's background to explain the benefits <b>or</b> challenges of collaboration.</p>	<p>5 Response identifies <b>two</b> benefits of collaboration and <b>one</b> challenge. Response includes at least one feature of each teacher's background to explain the benefits <b>and</b> challenges of collaboration.</p>
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Question 7

Identify at least **one** challenge, according to Ms. Delgado, involved with collaborating with Ms. Gardner?

<p>1 Response does not include the challenges that either teacher describes in the narrative.</p>		<p>2 Response vaguely describes one challenge from Ms. Delgado's perspective.</p>		<p>3 Response clearly describes one challenge. Includes words and phrases directly from the narrative.</p>
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Question 8

Identify at least **one** challenge, according to Ms. Gardner, involved with collaborating with Ms. Delgado?

1 Response does not include the challenges that either teacher describes in the narrative.		2 Response describes one challenge from Ms. Gardner's perspective.		3 Response clearly describes one challenge teacher identified, includes words and phrases directly from the narrative.
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Question 9

What are **three** skills or strategies that the teachers will need to enact in order to have a successful partnership?

1 Response does not identify any skills or strategies.		2 Response identifies two to three skills or strategies.		3 Response identifies three skills or strategies that teachers enact, including <b>communication of teachers' personal and professional backgrounds.</b>
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Question 10

What other factor(s), besides Abner’s mathematical abilities, may be impacting his understanding of the interventions provided by his teachers? Identify **at least one** and be as specific as possible.

<p>1 Response does not provide example of other factors that may be influencing student’s responsiveness to intervention.</p>		<p>2 Response includes an example of factors that is somewhat substantiated by information included in narrative.</p>	<p>3 Response includes <b>one or more</b> example(s) of factors and provides evidence from narrative (e.g., teacher is not providing interventions in student’s non-native language; demographic disparities between student and teachers). Clearly demonstrates how teachers lack of linguistic and cultural considerations factor into Abner’s lack of responsiveness to intervention.</p>
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Question 11

Should Abner be evaluated for special education services? Explain why or why not. Be as specific as possible.

<p>1 Response is simply a statement of belief without further explanation.</p>	<p>2 Response includes an attempt to connects stated belief with one of the following:</p> <ul style="list-style-type: none"> <li>• Abner’s cultural and linguistic needs</li> <li>or</li> <li>• Abner’s performance in mathematics</li> </ul>	<p>3 Response <b>vaguely</b> connects stated belief with one of the following:</p> <ul style="list-style-type: none"> <li>• Abner’s cultural and linguistic needs</li> <li>or</li> <li>• Abner’s performance in mathematics</li> </ul>	<p>4 Response <b>clearly</b> connects belief with one or more of the following:</p> <ul style="list-style-type: none"> <li>• Abner’s cultural and linguistic needs</li> <li>or</li> <li>• Abner’s performance in mathematics</li> </ul>	<p>5 Response connects <b>in detail</b> stated belief with one or more of the following:</p> <ul style="list-style-type: none"> <li>• Abner’s cultural and linguistic needs and</li> <li>• Abner’s performance in mathematics</li> </ul>
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## Appendix I

### Typed Excerpts from Journal Entries

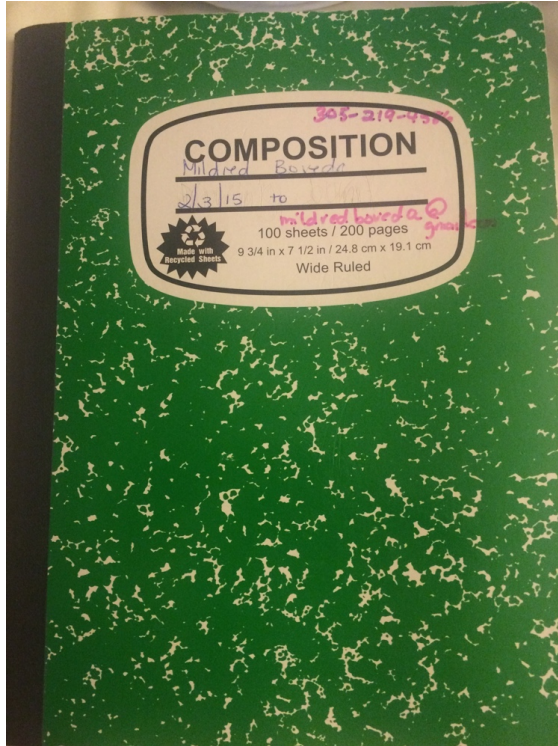


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### Literature Review Stage: Theoretical Evidence

Excerpt from: Claude Steel: He's My Vivaldi  
2015

February 20,

I don't know much about Vivaldi, but I know about Claude Steele. Whenever someone suggests that intersectionality is too abstract or social justice oriented to be measured, I am comforted by Claude Steele and remembering his book about capturing stereotype threat. A social psychologist, he discusses frankly about the years it took to get to the point where he and his team were about to satisfactorily capture explanations of understandings are part of the eight. However, I also have six other more action based

indicators. Furthermore, as I indicate in my proposal, there are two subset of items for my instrument the construct. Intersectional competence, (like stereotype threat) is abstract but remembering Claude Steel is like whistling Vivaldi (a reminder that despite other's expectations, I can in fact achieve my goal).

This morning I spent time listening to Steel's recent HGSE address on YouTube.

Askwith Forum:

Streamed live on Nov 5, 2014

Stereotype Threat: How It Affects Us and What We Can Do About It

Speaker: Claude Steele, Executive Vice Chancellor and provost, University of California - Berkeley; author of *Whistling Vivaldi: And Other Clues to How Stereotypes Affect Us and What We Can Do*

<https://www.youtube.com/watch?v=7COvt2lb2Uc>

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Excerpt from- Myosha's Article: Sample Dissertation, and Ziegler March 2, 2015

*Regarding my friend Myosha McAfee's article in the Harvard Education Review, Winter 2014 issue, "The Kinesiology of Race" and a phone conversation I had with her the same day as the journal entry:*

There are several implications that her article has to my study. First, I agree that having good intentions (or personal beliefs) does not always translate to good outcomes for students. Second, two of my preliminary indicators are captured by her description of traditional views of racial inequity, personal beliefs, and structuralists explanations or understandings are part of the eight. Furthermore, as I indicate in my proposal, there are two subsets of items for my instruments, and one is focused primarily on performance. A critique I have is the lack of education theorist or heavy emphasis on sociology...

Another outcome of my readings of the day was that I revisited a dissertation that I will be (in some ways) modeling my study after. The dissertation brings up a couple of microaggression issues that Claude Steel brought up in his Askwith Forum. The fact that

the name of the author seemed Asian (like others who I cite who wrote about instrument/methodology) triggered the stereotype threat that Asians are exceptional in STEM while other people of color aren't. As I skimmed through the first couple of pages, I noticed that the author's acknowledgements featured a bible verse. Intersectionality is about sociocultural markers, including religion, but religion is often downplayed in my experiences in academia and education/policy. The verse sparked my curiosity, and I googled the author. I assumed it was a male, but the psychometrician is a woman. Her intersecting identity are Asian/Women/Christian... cool.

Also, I noted that she cites Ziegler and they were probably contemporaries at the University of Minnesota. I believe it's the same Ziegler I refer to in my study. I think I should e-mail her and see if she will be presenting at AERA.

---

### **Focus Group Analysis: Theoretical Evidence**

Excerpt from: Focus Group 2

April 3, 2015

I have followed the committee's suggestions to have one focus group of all special ed majors (that was yesterday) and one mixed half-and-half (today) and one all general education group (scheduled for Monday). One thing that popped up yesterday during the first focus group of four special ed. majors was the influence that state and district politics, policies, and funding has on the categorization of students. It reminds me a bit of the "Wicked Problem" study of McCall and Skrtic. The participants were mentioning issues like how some students are placed in special ed because of the school grade or other factors such as teacher evaluation. (May be teachers are more likely to "push" a kid into special ed if they fear their low scores on assessments would impact



their teacher evaluation scores). Artiles speaks/writes about how districts/states game disproportionality numbers. Gaming is something that I may need to reflect on. (or not).

Tonight was a mixed group and I found the participants' responses were very much in line with my preliminary indicators. There was one international student whose discussion about the perception of Blacks in international media was fascinating. At one point I chimed in to "check the temperature" of the discussion. A student from the middle east/Asian discussed how she felt that walking around at FIU she feels the burden/responsibility to prove that not all middle easterners/Asians are "weird". She used the word "weird" but it was really about the perception of people from her background as being terrorists. It reminded me of Claude Steele's stereotype threat and multi-tasking discussions. A Black participant also discussed the politics of her hair style.

---

Excerpt from: Focus Group 3

April 6, 2015

I did it! I collected my focus group data. Today I had a couple of hiccups. At 5 AM I realized that I scheduled the room differently from what I told my participants. Thankfully, the folks of OGS were able to accommodate us anyway. Today's focus group was far more frustrating than the previous two. There were a couple of politically incorrect statements that stung me as a researcher of color. There was one point where one of the participants who identified as White stated she uses her whiteness to get ahead. That's one of several comments made that picked me. The one that sort of pushed me to the break "researcher "character was when a participant kept calling Black boys "angry". I pointed it out and perhaps gave them the impression that it bothered me because 10

minutes or so later (note to self: check transcripts) the participant student backtrack to fix or explain her statement.

Now I'm a bit upset with myself because in this qualitative phase, I am the primary research tool. Also the purpose of qualitative studies is to get the perspective of the participants. I have reached out to some friends to see if I could get resources to address researcher positionality, subjectivity, and general bias. I realize now that the concepts of intersectionality and inclusion of a political. This is a very fascinating thing because my intersecting identity is obviously a factor in my data collection research decisions, and will be in my analysis. The topic of millenials being politically correct came up in my lit review and in this focus group discussion. Also, the "surname" factor was interesting. At one point, I admitted that in search for White participants I looked at last names. There's a lot to unpack in this focus group session. That's good.

---

Expert Panel Review: Theoretical Evidence

Excerpt from: Relieved

June 9, 2015

I am feeling a bit relieved. As of today, I have successfully secured all panel members! A distinguished group of scholars who have diverse expertise and backgrounds have agreed to be expert reviewers. I have also submitted my first draft of items of the *Intersectional Competence Measure* to Dr. Blanton, my committee chair. I am really looking forward to receiving the input of my advisor. As soon as she gives me the okay, I will send a copy of the first draft along with instructions for providing feedback.

I understand that this time of the year is a busy one, so it is my hope that they will be able to submit their feedback within a month of receiving the instrument.

---

Excerpt from: Strange and Ironic E-mail

November 11, 2015

By this point I have already generated a report for the experts that summarized the data. It took me a while, but I tried to generate a report that my advisor would approve of. (I remember her mantra of "organization and consistency"). I'm glad that she approved :). Basically, my intentions are to let them know that the expert panel review phase of the study has been completed and to follow through with my original communications. I told initially told them that I would send them a summary of the reviews and a few indicated they wanted to see the outcome. Overall the experience with the expert panel reviewers has been refreshing. I am so impressed with how people who are eminent in the field take the time out to volunteer and help a doctoral student. One particular expert blew me away with the extent of the attention that she paid to details. It is quite evident that the scholars that I cited in my literature review find that my research is timely.

Despite this, I received a very peculiar e-mail from one of the original ten expert panel members. I didn't respond because I just didn't get it. She already sent me feedback (although it was not at all according to my instructions... and even after I pointed that out, she told me she didn't have time to do it over). But today I received an e-mail where she apologized, and it's quite clear that she forgot that she sent me the original feedback. It seems to me that she may be overwhelmed since a) she was the only expert to not follow directions and b) she forget that she ever responded. I imagine it's because she has so many things in her inbox. It's a shame (and kind of ironic) because this expert is an African American woman and intersectionality is Black feminist theory. Strange.

### **Cognitive Interviews: Theoretical Evidence**

Excerpt from: Metacognitive about the Cognitive Interviews

November 20, 2015

"What is most personal is most universal"- Carl R. Rogers.

How about that quote for generalizability? Three participants (all of which were at some point my students) asked whether it was me that I was writing about when it came to the character of Ms. Delgado in the narratives. I was pleased that they made the connection. Maybe other item developers or researchers would be threatened or intimidated with being “found out”... but one of the expert panel reviewers mentioned how realistic and interesting the narratives were, and I believe that the effectiveness of the narratives comes from being grounded in my teaching experiences.

During the week that I was conducting the cognitive interviews, I didn't journal much because I felt as though my field notes (which I kept on a typed Word document in addition to writings I made in my journal during face to face interviews). Today, as I review my field notes I am really pleased with where I am in the process. So much of the success and smoothness I experienced is related to the amount of attention that went in the designing and planning of the study. But not only that. While the focus group sessions sometimes prove to be a bit provocative, the cognitive interviews were a less emotionally jarring experience for me as the research... I mean in the sense that the participants were far less likely to make an extremely controversial statement when it was just one on one. Unlike the focus group of general education majors who seemed to feed off of each other's prejudices (for lack of a better word... this is MY reflective journal (the cognitive interviewees seem far more reflective and thoughtful, verses reactionary. I wonder to what extent is this something that is related to social desirability or being right face-to-face with him. Perhaps because the conversations in the cognitive interviews were

centered and anchored in the actual items versus just a general discussion about their feelings on a certain topic. I also haven't any noticed any clear distinctions between majors like the patterns in focus groups. Another thing that was really interesting was just to get the feedback of the participants. A few participants also indicated that taking the test helped them to think about these issues (which I think is a finding... one that I really didn't expect).

---

### **Pilot Study: Empirical Evidence**

Excerpt from: Valentine's Day and Broken Heart Syndrome      February 13, 2016

It looks like losing my dissertation data last Saturday may have almost killed me. Well, my cardiologists suspects I have "Broken Heart Syndrome" and will be running more analyses tomorrow to see if there was any structural damage to my heart... Happy Valentine's Day! ☺ It's all good. Apparently, even though I didn't feel it at first, and even though I was able to retrieve all of the data within hours of losing the info (thank God for Qualtrics customer service being open on the weekends), the initial shock took a lot out of me. It's a reminder that this is very personal work and that I need to stop and chill.

That Saturday was a crazy day and I was in the midst of trying to apply for jobs and at the same time get my dissertation data in order. It was just too much to do both simultaneously. At any rate, at this point I am focused on getting better and on wrapping up the dissertation. The job hunt will have to be put on hold (because something has to give, and that something should not be my health). The tedious part of analyzing this pilot data is inputting and coding all of the quantitative data in such a format that it is

ready for the STATA packaging system. It's very time consuming, and I'm coming to the daunting realization that I underestimated the amount of time it would take me to run the analyses.

Appendix J

First Draft of the ICM

Subset A

**Indicator: Identification of Markers of Difference**

1. Would students and teachers benefit from having a basic understanding of different (diverse) cultures, disability categories, ethnicities, races, and religions?

Not benefit at all  
Slightly benefit  
Fairly benefit  
Quite benefit  
Extremely benefit

2. Are people with disabilities adequately represented in most textbooks today?

Not adequately represented at all  
Slightly represented  
Fairly represented  
Quite represented  
Extremely represented

3. Is the attention that girls receive in school comparable to the attention boys receive? Girls receive

much less attention than boys  
slightly less attention than boys  
the same attention as boys  
slightly more attention than boys  
a lot more attention than boy

4. How accurate is the following statement: Only teachers who are prejudiced or racist need to learn about diversity because effective teachers treat all students the same.

Not accurate at all  
Slightly accurate  
Fairly accurate  
Quite accurate  
Extremely accurate

5. How accurate is the following statement: Only schools serving students of color need a racially, ethnically, linguistically, and culturally diverse staff and faculty.

Not accurate at all  
Slightly accurate  
Fairly accurate  
Quite accurate  
Extremely accurate

### **Simultaneous Effects of Multiple Markers**

6. In the United States, is privilege (or advantages in life outcomes) often associated with the combination of masculinity, White skin, and wealth? Privilege is

not at all associated with that combination  
slightly associated with that combination  
fairly associated with that combination  
quite associated with that combination  
extremely associated with that combination

7. How accurate is the following statement: Many women in our society continue to live in poverty because males still dominate most of the major social systems in the U.S.

Not accurate at all  
Slightly accurate  
Fairly accurate  
Quite accurate  
Extremely accurate

8. Generally, do school personnel place students who come from culturally and linguistically diverse backgrounds improperly in special education classes? Students who come from culturally and linguistically diverse backgrounds are

not at all improperly placed in special education  
slightly improperly placed in special education  
fairly improperly placed in special education  
quite often improperly placed in special education  
extremely often improperly placed in special education



9. How accurate is the following statement: If culturally and/or linguistically diverse students are placed in special education and start to receive services, their teachers no longer need to consider their cultural or linguistic educational needs.

Not accurate at all  
Slightly accurate  
Fairly accurate  
Quite accurate  
Extremely accurate

### **Emphasis on Power Relations and Marginalization**

10. How accurate is the following statement: People live in poverty because they lack motivation to get themselves out of poverty.

Not accurate at all  
Slightly accurate  
Fairly accurate  
Quite accurate  
Extremely accurate

11. Is making all public facilities accessible to people with physical disabilities (for example, making wheelchair accessible restrooms) too costly?

Not costly at all  
Slightly costly  
Fairly costly  
Quite costly  
Extremely costly

12. Do men deserve higher wages than women since men are frequently considered “the heads of households”? Men

do not deserve higher wages at all  
deserve slightly higher wages than women  
deserve fairly higher wages than women  
deserve quite higher wages than woman  
deserve extremely higher wages than woman

13. Are people with physical disabilities less effective leaders than people without physical disabilities? People with physical disabilities are

- much less effective leaders.
- slightly less effective leaders.
- just as effective leaders.
- slightly more effective leaders.
- a lot more effective leaders.

14. Can students living in economically isolated neighborhoods benefit socially and academically from economically integrated classrooms?

- Not benefit at all
- Slightly benefit
- Fairly Benefit
- Quite Benefit
- Extremely benefit

#### **Capacity to Co-construct Professional Roles and Responsibilities**

15. Are teachers expected to adjust their preferred mode of instruction to accommodate the needs of all students?

- Not expected at all
- Rarely expected
- Sometimes expected
- Often expected
- Always expected

16. Do parents and families possess knowledge and expertise that can increase the educational benefits for students? Parents and families possess

- no knowledge and expertise at all
- a little knowledge and expertise
- some knowledge and expertise
- quite a bit of knowledge and expertise
- a great amount of knowledge and expertise

17. In a co-teaching, collaborative teaching model, is the special education teacher expected to share responsibility with the general education teacher for all students in the classroom?

Never expected to share responsibility for all students  
Rarely expected to share responsibility for all students  
Sometimes expected to share responsibility for all students  
Often expected to share responsibility for all students  
Always expected to share responsibility for all student

### **Assess How Structural Forces Effect Placement and Experiences of SWD**

18. Can teachers' lack of knowledge of culturally and linguistically diverse backgrounds than their own negatively impact students' learning experiences?

Not impact at all  
Slightly impact  
Fairly impact  
Quite impact  
Extremely impact

19. Is the traditional classroom set up to support the middle-class lifestyle?

Not set up to support the middle-class lifestyle at all  
Slightly set up to support middle-class lifestyle  
Fairly set up to support middle-class lifestyle  
Quite set up to support middle-class lifestyle  
Extremely set up to support middle-class lifestyle

20. Is whether students succeed in school dependent primarily on how hard they work?

Not dependent at all  
Slightly dependent  
Fairly dependent  
Quite dependent  
Extremely dependent

21. Is being responsive to cultural and linguistic academic needs of students as important as addressing reading or mathematical abilities? Responding to cultural and linguistic needs is

- much less important than addressing reading or mathematical abilities
- slightly less important than addressing reading or mathematical abilities
- just as important as addressing reading or mathematical abilities
- slightly more important than addressing reading or mathematical abilities
- a lot more important than addressing reading or mathematical abilities

### **Personal and Professional Beliefs/Susceptible to Change**

22. Is examining one's own attitudes and beliefs about disabilities, gender, linguistic origin, race and socioeconomic background an important part of learning to be a teacher? It is

- not important to examine one's own attitudes at all
- slightly important to examine one's own attitudes
- fairly important to examine one's own attitudes
- quite important to examine one's own attitudes
- extremely important to examine one's own attitudes

23. Do teachers need to consider the advantages or disadvantages they have experienced in life because of gender, linguistic origin, race, and socioeconomic status?

- No consideration is necessary at all
- A little consideration is necessary
- Some consideration is necessary
- Quite a bit of consideration is necessary
- A lot of of consideration is necessary

24. Is it more important that students who are immigrants from non-English speaking countries learn English than to maintain and develop their native language proficiency? Learning English is

- much less important than maintaining native language
- slightly less important than maintaining native language
- just as important as maintaining native language
- slightly more important than maintaining native language
- a lot more important than maintaining native language

25. In general, do White people place a higher value on education than Blacks/African Americans? White people place

much less value on education than Blacks/African Americans  
slightly less value on education than Blacks/African Americans  
just as much value on education than Blacks/African Americans  
slightly more value on education than Blacks/African Americans  
a lot more value on education than Blacks/African Americans

### **Teaching as Agency**

26. Is addressing gender role stereotypes when they occur in instructional material or educational settings part of the responsibilities of the teacher?

Not part of teacher responsibilities at all  
Slightly part of teacher responsibilities  
Somewhat part of teacher responsibilities  
Quite a part of teacher responsibilities  
Very much a part of teacher responsibilities

27. Generally, should teachers group students of the same ability levels together?  
Teachers should

Never group students by ability levels  
Rarely group students by ability level  
Sometimes group students by ability level  
Often group students by ability level  
Always group students by ability level

28. Is challenging school arrangements, practices, and/or policies that maintain societal inequities part of the responsibilities of the teacher?

Not part of teacher responsibilities at all  
Slightly part of teacher responsibilities  
Somewhat part of teacher responsibilities  
Quite a part of teacher responsibilities  
Very much a part of teacher responsibilities

29. How accurate is the following statement: Although teachers may appreciate diversity within their classrooms, it is not their job to change society.

Not accurate at all  
Slightly accurate

Fairly accurate  
Quite accurate  
Extremely accurate

**High Expectations for all Students**

30. Is student achievement related to the teacher's academic expectations?

Not related at all  
Slightly related  
Fairly related  
Quite related  
Extremely related

31. Is it reasonable for teachers to have lower academic expectations for students who do not speak English as their first language?

Not related at all  
Slightly related  
Fairly related  
Quite related  
Extremely related

## Subset B

**Narrative A:** Palm Tree Elementary School recently marked its 60-year anniversary. The demographic composition of the school has changed substantially throughout the years. When it first opened in the 1950's, all of the students were from White, middle class families; the faculty and staff were also predominately White. Today, with a student population that is 91% Black/African American and 7% Hispanic, 95.7% of Palm Tree Elementary students are eligible for free and reduced lunch. Approximately one third of the administrators and teachers are Black/African American, one third are Hispanic, and one third are White. The cafeteria, custodial, and security staff are predominately Black/African American, as are the members of the office personnel.

School district administrators have identified Palm Tree Elementary School as needing additional district-level support and supervision. For the past three years, Palm Tree Elementary School performed below the district average on the state's math and reading assessments. In addition, the principal and assistant principals are concerned about a pattern that has recently developed. The enrollment at Palm Tree has been on the decline, especially after two charter schools opened up in the neighborhood. Many of the students that are leaving Palm Tree are students from the talented and gifted program, which typically have some of the school's most engaged families.

There are a total of 540 PK through fifth grade students enrolled at Palm Tree Elementary. Currently, 6% of the students are identified as gifted and 14% are in special education. The percentage of English Language Learners, currently at 8%, has subtly

increased as Central American and Haitian immigrant families have moved into the neighborhood.

Table 1. Demographic Information: Percentage of public school students per enrollment

	<b>Palm Tree</b>	<b>District</b>	<b>State</b>	<b>United States</b>
<b>% Asian/PI</b>	0	1	3	5
<b>% Black/ AA</b>	91	24	20	16
<b>%Hispanic / Latina/o</b>	7	66	29	24
<b>% White</b>	1	8	45	51
<b>% Native American</b>	0	0.5	0.5	1
<b>% Other</b>	1	0.5	2	3
<b>%Free/Reduced Lunch</b>	96	74	57	51
<b>% English Language Learners</b>	8	29	8	9.2
<b>% Special Education</b>	14	12	1	13
<b>Gifted</b>	6	7	6	6.3

Table 2. Teacher Demographics: Percentage of public school teachers

	<b>Palm Tree</b>	<b>District</b>	<b>State</b>	<b>United States</b>
<b>% Asian/PI</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>2</b>
<b>% Black/ AA</b>	<b>33</b>	<b>28</b>	<b>13</b>	<b>7</b>
<b>%Hispanic / Latina/o</b>	<b>33</b>	<b>47</b>	<b>13</b>	<b>8</b>
<b>% White</b>	<b>33</b>	<b>22</b>	<b>71</b>	<b>82</b>
<b>% Native American</b>	<b>0</b>	<b>0</b>	<b>0.3</b>	<b>0.5</b>
<b>% Other</b>	<b>0</b>	<b>1</b>	<b>0.7</b>	<b>0.5</b>



**Questions:**

1. After completing your teacher education program, if you were assigned to work at Palm Tree Elementary School, what role(s) would you be most prepared to serve?

(Check all that apply).

Early Childhood/Lower Elementary (i.e., PK, 1<sup>st</sup> or 2<sup>nd</sup> grade)

Upper Elementary (i.e., 3<sup>rd</sup>, 4<sup>th</sup>, or 5<sup>th</sup> grade)

Special Education

Gifted Education

English Language Learner/English for Speakers of Other Languages

I would not be eligible to serve in any capacity at Palm Tree Elementary

Explain your response and be as specific as possible:

2. To what extent is the percentage of English Language Learners at Palm Tree Elementary comparable to that of the district? The percentage of English Language Learners is:

extremely lower than the district

slightly lower than the district

about the same as the district

slightly higher than the district

extremely higher than the district

3. To what extent is the percentage of students eligible for free and reduced lunch at Palm Tree Elementary comparable to that of the state? The percentage of students eligible is:

extremely lower than the state

slightly lower than the state

about the same as the state

slightly higher than the state

extremely higher than the district

4. To what extent is the percentage of racial/ethnic diversity of the teachers and administrators at Palm Tree Elementary comparable to that of the United States? The faculty at Palm Tree Elementary is:

- much less diverse than the U.S.
- slightly less diverse than the U.S.
- approximately as diverse as the U.S.
- slightly more diverse than the U.S.
- extremely more diverse than the U.S.

5. Do you believe that the school's demographic composition (such as the percentage of students eligible for free and reduced lunch or the percentage of Black/African American students) is related to the schools performance on the state assessments? The school's demographic composition is:

- not at all related to the school's performance on the state assessment
- slightly related to the school's performance on the state assessment
- somewhat related to the school's performance on the state assessment
- quite related to the school's performance on the state assessment
- extremely related to the school's performance on the state assessment.

6. Explain your answer to item 5 and be as specific as possible:

**Narrative B:** Maya Delgado is a first year teacher who recently graduated with a B.S. in Special Education from your institution. Ms. Delgado was the first person in her family to be born in the United States; her parents and older siblings were born in Honduras, a country in Central America. She considers herself to be Afro-Latina, identifying with both her African and Latin American heritage. Although Spanish was her first language, today Ms. Delgado, her husband, and her daughter primarily speak English at home. Ms. Delgado was motivated to become a special education teacher because she strongly believes that education is a social justice issue. She desires to be in a profession in which she can help to improve the opportunities available for others.

During her teacher preparation program, Ms. Delgado completed over 100 field hours in six schools across the district. Ms. Delgado was excited to learn that her first teaching assignment was close to her old neighborhood. She grew up less than a mile away from Palm Tree Elementary School and went to middle and high school with several of the students' parents. Ms. Delgado's daughter is in pre-Kindergarten and, although she now lives in a different neighborhood, she has decided to enroll her daughter at Palm Tree.

Ms. Delgado is one of two special education teachers at the school. She is responsible for the services provided to 15 third and fourth grade students, all who spend 80% or more of the school day in the general education classroom. Twelve of the students are African American boys and one student is a Hispanic boy who is also an English Language Learner. Of the two girls who are assigned to Ms. Delgado, one is African American and the other is White. Ms. Delgado co-teaches with four general education teachers and

typically spends an hour a day in each of their classrooms. In addition to co-teaching and providing support facilitation, Ms. Delgado has weekly consultations with three teachers.

**Questions:**

7. What are **at least two** features of Ms. Delgado's personal experiences and/or background that would be an asset to the faculty, students, and families of Palm Tree Elementary? Explain why and be as specific as possible.

8. What is **at least one** feature of Ms. Delgado's professional training and experiences that would be an asset to the faculty, students, and families of Palm Tree Elementary? Explain why and be as specific as possible.

9. Based on your courses and field hours with cooperating teachers, is Ms. Delgado's belief that teaching is a profession that improves the opportunities available for others accurate?

Not at all. Teachers do not make a difference.

Teachers slightly make a difference.

Teachers somewhat make a difference.

Teachers make quite a difference.

Teachers make an extreme difference.

**Narrative C:** Catherine Gardner has taught for 22 years and is a National Board Certified Teacher. Like Ms. Delgado, this is her first year at Palm Tree Elementary School. Ms. Gardner proudly hails from a family of teachers. She grew up in a small town in the Midwest with a relatively homogeneous community of people. Most families were descendants of immigrants who migrated to the area in the 19<sup>th</sup> century from Sweden, Norway, Denmark, and Germany. After graduating high school, Ms. Gardner decided to move out of her state and attend a university in a large urban city. During her time at the university, Ms. Gardner met her future spouse and eventually made the choice to stay in the city. Ms. Gardner became fluent in Spanish, making an effort to learn the language because most schools she worked in had large populations of families from Latin America.

Prior to Palm Tree Elementary, Ms. Gardner was a mathematics teacher at a high school located in the southern part of the district. She taught honors and Advance Placement classes and received numerous awards and recognitions for her teaching. The principal of Palm Tree Elementary actively recruited Ms. Gardner, along with three other veteran teachers, in an effort to produce better results on the state's math and reading assessment. Ms. Gardner is passionate about mathematics and insists on creating opportunities for students to engage in hands on activities.

The upper elementary grades are compartmentalized by subject areas. Ms. Gardner is responsible for teaching math and science to three groups of fourth graders. Within the second group that meets with her for two hours daily, there are four students with Individualized Education Plans (IEPs). Ms. Delgado comes in for one hour to provide

support facilitation in mathematics. To accommodate Ms. Delgado's schedule, Ms. Gardner does her best to transition between science and math at the same time each day.

Questions:

**Questions:**

107. What are **at least two** features of Ms. Gardner's personal experiences and/or background that would be an asset to the faculty, students, and families of Palm Tree Elementary? Explain why the features you identified are assets. Be as specific as possible.

118. What is **at least one** feature of Ms. Gardner's professional training and experiences that would be an asset to the faculty, students, and families of Palm Tree Elementary? Explain why the feature you identified is an asset. Be as specific as possible.

129. Ms. Delgado and Ms. Gardner are colleagues who collaborate on a daily basis. After reading about their respective backgrounds,

what are **two** potential benefits, (that is, for students, families, and each other) of their collaborative efforts?

What is **one** potential challenge?

1310. What are **three** skills or strategies that the teachers will need to enact in order to have a successful partnership?

**Narrative D:** *The first four weeks of the school year were especially challenging for both Ms. Delgado and Ms. Gardner.*

*Ms. Delgado:* "We had to collaborate with each other and both of us were still learning the culture of the school. It wasn't easy. Ms. Gardner would sometimes try to treat me like an assistant instead of like her colleague".

*Ms. Gardner:* "Admittedly, at times I was frustrated. Unlike the group that meets with me in the morning, or my last group of the day, I had less flexibility with this second group. Once Ms. Delgado came in, I would have to stop everything and transition into math. Sometimes she wouldn't come in because she was pulled in for a meeting."

*Ms. Delgado:* "I remember a few times when Ms. Gardner did not stop teaching science. The first time, I sat in the back and waited for about 20 minutes before she transitioned into math. The next time it happened, I inserted myself in the lesson. I've always liked math and science; I even took a couple of AP math and science exams during my time in high school. Had I not been knowledgeable about the math and science content, I'm pretty sure she would have totally dismissed me".

*When the principal approached Ms. Delgado about a district professional development opportunity available for her and one of the general education teachers she worked with, Ms. Delgado suggested that Ms. Gardner and her go.*

*Ms. Delgado:* "The district provided substitute funding for both Ms. Gardner and I. The PD was about co-teaching and collaboration between gen ed and special ed teachers. Most of the information and activities were ideas I learned during my teacher prep program. I could tell that it was all new to Ms. Gardner. We reviewed several strategies for co-planning and communicating classroom expectations. She was really into the session. Although I've never really told her this directly, that PD marked a turning point in our collaboration".

*Ms. Gardner:* “I’ve given several PDs for the district and I was impressed by the instructor. The graphic organizers they provided us were really helpful. It was worth the effort”.

### **Questions**

~~14.~~ What, according to Ms. Delgado, was **one** challenge involved with collaborating with Ms. Gardner?

What, according to Ms. Gardner, was **one** challenge involved with collaborating with Ms. Delgado?

15. In your own words, what are **at least two** other factors that may have contributed to the challenges they faced?

By the second semester, Ms. Delgado and Ms. Gardner had established a set routine for co-planning, parental communication, and providing feedback to students. Both teachers were responsible for delivering math instruction for all learners in the 4<sup>th</sup> grade mathematics class.

During her teacher preparation courses and field experience hours, Ms. Delgado learned numerous strategies for differentiating instruction and reaching students who had



difficulty grasping a lesson. She would often check in on the students in Ms. Gardner's class who struggled to understand a mathematical concept. By October, both Ms. Delgado and Ms. Gardner were noticing that Abner often needed extra support.

Despite the extra support provided by his teachers, and a month tracking his performance on a research-based math software program, Abner showed little learning gains in math. During one of their planning sessions, Ms. Gardner asked Ms. Delgado if she thought that Abner should be recommended for evaluation for special education services.

Abner's family recently moved into the neighborhood. Ms. Delgado and Ms. Gardner each had prior experience working with Spanish speakers and were certified by the state to work with English Language Learners. They had little experience, however, working with students whose home-language is Haitian-Creole.

Ms. Gardner asked Ms. Pierre, a fourth grade teacher who was of Haitian descent, to help translate during an after-school parent conference. The parents were not able to take off work to attend the meeting, but had a brief phone conversation with Ms. Pierre. The teachers learned that although he was the same age as his peers, before moving to the United States two years ago, Abner had less than one year of formal schooling in Haiti.

**Questions:**

16. Palm Tree Elementary has a school wide, multi-tiered approach to student intervention referred to as Response to Intervention or RtI. From the scenario presented above, provide **at least one** example of evidence that Ms. Delgado and Ms. Gardner implemented a system of instruction and interventions that was driven by student outcomes.

17. ~~14.~~ What other factor(s), besides Abner's mathematical abilities, may be impacting his understanding of the interventions provided by his teachers? Identify **at least one** and be as specific as possible.

18. ~~15.~~ Should Abner be evaluated for special education service? Explain why or why not. Be as specific as possible.

## Appendix K

### Second Draft of the ICM

#### **Indicator: Identification of Markers of Difference**

1. Would students benefit from having teachers who understand the influence disability category, gender identity, ethnicity, linguistic origin, race, religion, and socioeconomic status have on a person's life?

Not benefit at all  
Slightly benefit  
Fairly benefit  
Quite benefit  
Extremely benefit

2. Are people with disabilities adequately represented in K-12 textbooks today?

Not represented at all  
Slightly represented  
Fairly represented  
Quite represented  
Extremely represented

3. Is the attention that girls receive in school comparable to the attention boys receive?

girls receive much less attention than boys  
girls receive slightly less attention than boys  
girls receive the same attention as boys  
girls receive slightly more attention than boys  
girls receive a lot more attention than boys

#### **Simultaneous Effects of Multiple Markers**

4. In the United States, is privilege—or unfair advantages and access to opportunities— associated with the combination of masculinity, White skin, and wealth?

not at all associated with that combination  
slightly associated with that combination  
fairly associated with that combination  
quite associated with that combination  
extremely associated with that combination

5. Do women, as a group, experience more poverty than men because social institutions systematically discriminate against women while privileging their male counterparts?

poverty is not at all associated with gender discrimination  
poverty is slightly associated with gender discrimination  
poverty is somewhat associated with gender discrimination  
poverty is quite associated with gender discrimination  
poverty is extremely associated with gender discrimination

6. Generally, do school personnel improperly place non-White students in special education classes?

non-White students are never improperly placed at all  
non-White students are slightly improperly placed  
non-White students are somewhat improperly placed  
non-White students are quite often improperly placed  
non-White students are extremely often improperly placed

7. Do teachers need to consider the language needs of second language learners after they are placed in special education?

No consideration is necessary at all  
A little consideration is necessary  
Some consideration is necessary  
Quite a bit of consideration is necessary  
A lot of consideration is necessary

### **Emphasis on Power Relations and Marginalization**

8. Do schools need a racially, ethnically, and linguistically diverse staff?

Do not need at all  
Slightly need  
Fairly need  
Quite need  
Extremely need

9. Which schools, if any, have a higher need for a racially, ethnically, and linguistically diverse staff and faculty?

Schools serving predominately White students have a much greater need for a diverse staff and faculty.

Schools serving predominately White students have a slightly greater need for a diverse staff and faculty

All schools need a diverse staff and faculty

Schools serving predominately non-White students have a slightly greater need for a diverse staff and faculty

Schools serving predominately non-White students have a much greater need for a diverse staff and faculty.

10. Can students living in economically isolated neighborhoods benefit socially and academically from economically integrated classrooms?

Not benefit at all

Slightly benefit

Fairly Benefit

Quite Benefit

Extremely benefit

### **Capacity to Co-construct Professional Roles and Responsibilities**

11. Are teachers expected to adjust their preferred mode of instruction to accommodate the needs of all students?

Not expected at all

Rarely expected

Sometimes expected

Often expected

Always expected

12. Do parents and families possess knowledge and expertise that can increase the educational benefits for students?

parents and families possess no knowledge and expertise at all

parents and families possess a little knowledge and expertise

parents and families possess some knowledge and expertise

parents and families possess quite a bit of knowledge and expertise

parents and families possess a great amount of knowledge and expertise

## **Assess How Structural Forces Effect Placement and Experiences of SWD**

13. Can teachers' lack of knowledge about racial, ethnic, socioeconomic, and linguistic groups other than their own negatively impact the school experiences and academic outcomes of students who are different from themselves?

No impact at all  
Slightly impact  
Fairly impact  
Quite impact  
Extremely impact

14. Is a student's school success dependent on how hard they work to learn?

Not dependent at all  
Slightly dependent  
Fairly dependent  
Quite dependent  
Extremely dependent

15. Is being responsive to cultural and linguistic needs of students as important as addressing reading or mathematical abilities?

Much less important than addressing reading or mathematical abilities  
Slightly less important than addressing reading or mathematical abilities  
Just as important as addressing reading or mathematical abilities  
Slightly more important than addressing reading or mathematical abilities  
A lot more important than addressing reading or mathematical abilities

## **Personal and Professional Beliefs/Susceptible to Change**

16. Is examining one's own attitudes and beliefs about disabilities, gender, linguistic origin, race, religion, sexuality, and socioeconomic background an important part of learning to be a teacher?

Not important to examine one's attitudes at all  
Slightly important to examine one's attitudes  
Fairly important to examine one's attitudes  
Quite important to examine one's attitudes  
Extremely important to examine one's attitudes

17. Do teachers need to consider the privilege they derive, if any, based on their gender, linguistic origin, race, religion, sexuality, and socioeconomic status to be effective teachers?

No consideration is necessary at all  
A little consideration is necessary  
Some consideration is necessary  
Quite a bit of consideration is necessary  
A lot of of consideration is necessary

18. Is it more important for students who immigrate to the U.S. from countries in which a language other than English is the dominant language to be fully immersed in English in school than to spend time maintaining and developing their native language proficiency?

Much less important than maintaining native language  
Slightly less important than maintaining native language  
Just as important as maintaining native language  
Slightly more important than maintaining native language  
A lot more important than maintaining native language

### **Teaching as Agency**

19. Is helping students question gender role stereotypes when they are evident in instructional materials or in other forms within educational settings part of the responsibilities of the teacher?

Not part of teacher responsibilities at all  
A small part of teacher responsibilities  
Somewhat part of teacher responsibilities  
Quite a bit a part of teacher responsibilities  
Very much a part of teacher responsibilities

20. Should teachers ever group students of the same ability levels together?

Never group students by ability levels  
Rarely group students by ability level  
Sometimes group students by ability level  
Often group students by ability level  
Always group students by ability level

21. Is it part of the responsibilities of a teacher to challenge school arrangements, policies, and practices that maintain social inequalities based on race, ethnicity, social class, language, and/or special needs?

Not part of teacher responsibilities at all  
Slightly part of teacher responsibilities  
Somewhat part of teacher responsibilities  
Quite a part of teacher responsibilities  
Very much a part of teacher responsibilities

### **High Expectations for all Students**

22. Is student achievement related to the teachers' academic expectations?

Not related at all  
Slightly related  
Fairly related  
Quite related  
Extremely related

23. Is it reasonable for teachers to have lower academic expectations for students who do not speak English at home?

Not reasonable at all  
Slightly reasonable  
Fairly reasonable  
Quite reasonable  
Extremely reasonable



**Narrative A:** Palm Tree Elementary School recently marked its 60-year anniversary. The demographic composition of the school has changed substantially throughout the years. When it first opened in the 1950's, all of the students were from White, middle class families; the faculty and staff were also predominately White. Today, with a student population that is 91% Black/African American and 7% Hispanic, 95.7% of Palm Tree Elementary students are eligible for free and reduced lunch. Approximately one third of the administrators and teachers are Black/African American, one third are Hispanic, and one third are White. The cafeteria, custodial, and security staff are predominately Black/African American, as are the members of the office personnel.

School district administrators have identified Palm Tree Elementary School as needing additional district-level support and supervision. For the past three years, Palm Tree Elementary School performed below the district average on the state's math and reading assessments. In addition, the principal and assistant principals are concerned about a pattern that has recently developed. The enrollment at Palm Tree has been on the decline, especially after two charter schools opened up in the neighborhood. Many of the students that are leaving Palm Tree are students from the talented and gifted program, which typically have some of the school's most engaged families.

There are a total of 540 PK through fifth grade students enrolled at Palm Tree Elementary. Currently, 6% of the students are identified as gifted and 14% are in special education. The percentage of English Language Learners, currently at 8%, has subtly increased as Central American and Haitian immigrant families have moved into the neighborhood.

Table 1. Demographic Information: Percentage of public school students per enrollment

	<b>Palm Tree</b>	<b>District</b>	<b>State</b>	<b>United States</b>
<b>% Asian/PI</b>	0	1	3	5
<b>% Black/ AA</b>	91	24	20	16
<b>%Hispanic / Latina/o</b>	7	66	29	24
<b>% White</b>	1	8	45	51
<b>% Native American</b>	0	0.5	0.5	1
<b>% Other</b>	1	0.5	2	3
<b>%Free/Reduced Lunch</b>	96	74	57	51
<b>% English Language Learners</b>	8	29	8	9.2
<b>% Special Education</b>	14	12	1	13
<b>Gifted</b>	6	7	6	6.3

Table 2. Teacher Demographics: Percentage of public school teachers

	<b>Palm Tree</b>	<b>District</b>	<b>State</b>	<b>United States</b>
<b>% Asian/PI</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>2</b>
<b>% Black/ AA</b>	<b>33</b>	<b>28</b>	<b>13</b>	<b>7</b>
<b>%Hispanic / Latina/o</b>	<b>33</b>	<b>47</b>	<b>13</b>	<b>8</b>
<b>% White</b>	<b>33</b>	<b>22</b>	<b>71</b>	<b>82</b>
<b>% Native American</b>	<b>0</b>	<b>0</b>	<b>0.3</b>	<b>0.5</b>
<b>% Other</b>	<b>0</b>	<b>1</b>	<b>0.7</b>	<b>0.5</b>

**Questions:**

1. Is the school's demographic composition (such as the percentage of students eligible for free and reduced lunch or the percentage of Black/African American students) related to the schools performance on the state assessments?

not at all related to the school's performance on the state assessment

slightly related to the school's performance on the state assessment

somewhat related to the school's performance on the state assessment

quite related to the school's performance on the state assessment

extremely related to the school's performance on the state assessment.

2. Explain your answer to item 1 and be as specific as possible:

**Narrative B:** Maya Delgado is a first year teacher who recently graduated with a B.S. in Special Education. Ms. Delgado was the first person in her family born in the United States; her parents and older siblings were born in Honduras, a country in Central America. She considers herself to be Afro-Latina, identifying with both her African and Latin American heritage. Although Spanish was her first language, today Ms. Delgado, her husband, and her daughter primarily speak English at home. Ms. Delgado was motivated to become a special education teacher because she strongly believes that education is a social justice issue. She desires to be in a profession in which she can help to improve the opportunities available for others.

During her teacher preparation program, Ms. Delgado completed over 100 field hours in six schools across the district. Ms. Delgado was excited to learn that her first teaching assignment was close to her old neighborhood. She grew up less than a mile away from Palm Tree Elementary School and went to middle and high school with several of the students' parents. Ms. Delgado's daughter is in pre-Kindergarten and, although she now lives in a different neighborhood, she has decided to enroll her daughter at Palm Tree.

Ms. Delgado is one of two special education teachers at the school. She is responsible for the services provided to 15 third and fourth grade students, all who spend 80% or more of the school day in the general education classroom. Twelve of the students are African American boys and one student is a Hispanic boy who is also an English Language Learner. Of the two girls who are assigned to Ms. Delgado, one is African American and the other is White. Ms. Delgado co-teaches with four general education teachers and typically spends an hour a day in each of their classrooms. In addition to co-teaching and

providing support facilitation, Ms. Delgado has weekly consultations with three general education teachers.

**Questions:**

3. What are **at least two** features of Ms. Delgado's *personal* experiences and/or background that would be an asset to the faculty, students, and families of Palm Tree Elementary? Explain why and be as specific as possible.
  
4. What is **at least one** feature of Ms. Delgado's *professional* training and experiences that would be an asset to the faculty, students, and families of Palm Tree Elementary? Explain why and be as specific as possible.
  
5. In reflecting on your own courses and field experiences, do you agree with Ms. Delgado's belief that teaching is a profession that makes a difference in students school experiences, academic outcomes, and future lives?

Not at all. Teachers do not make a difference.

Teachers slightly make a difference.

Teachers somewhat make a difference.

Teachers make quite a difference.

Teachers make an extreme difference

**Narrative C:** Catherine Gardner has taught for 22 years and is a National Board Certified Teacher. Like Ms. Delgado, this is her first year at Palm Tree Elementary School. Ms. Gardner proudly hails from a family of teachers. She grew up in a small town in the Midwest with a relatively homogeneous community of people. Most families were descendants of immigrants who migrated to the area in the 19<sup>th</sup> century from Sweden, Norway, Denmark, and Germany. After graduating high school, Ms. Gardner decided to move out of her state and attend a university in a large urban city. During her time at the university, Ms. Gardner met her future spouse and eventually made the choice to stay in the city. Ms. Gardner became fluent in Spanish, making an effort to learn the language because most schools she worked in had large populations of families from Latin America.

Prior to Palm Tree Elementary, Ms. Gardner was a mathematics teacher at a high school located in the southern part of the district. She taught honors and Advance Placement classes and received numerous awards and recognitions for her teaching. The principal of Palm Tree Elementary actively recruited Ms. Gardner, along with three other veteran teachers, in an effort to produce better results on the state's math and reading assessment. Ms. Gardner is passionate about mathematics and insists on creating opportunities for students to engage in hands-on activities.

The upper elementary grades are compartmentalized by subject areas. Ms. Gardner is responsible for teaching math and science to three groups of fourth graders. Within the second group that meets with her for two hours daily, there are four students with Individualized Education Plans (IEPs). Ms. Delgado comes in for one hour to provide

support facilitation in mathematics. To accommodate Ms. Delgado's schedule, Ms. Gardner does her best to transition between science and math at the same time each day.

**Questions:**

6. What are **at least two** features of Ms. Gardner's *personal* experiences and/or background that would be an asset to the faculty, students, and families of Palm Tree Elementary? Explain why the features you identified are assets. Be as specific as possible.
  
7. What is **at least one** feature of Ms. Gardner's *professional* training and experiences that would be an asset to the faculty, students, and families of Palm Tree Elementary? Explain why the feature you identified is an asset. Be as specific as possible.
  
8. Ms. Delgado and Ms. Gardner are colleagues who collaborate on a daily basis. After reading about their respective backgrounds, what are **two** potential benefits, (that is, for students, families, and each other) of their collaborative efforts?

What is **one** potential challenge?

9. What are **three** skills or strategies that the teachers will need to enact in order to have a successful partnership?



**Narrative D:** *The first four weeks of the school year were especially challenging for both Ms. Delgado and Ms. Gardner. The following contains comments made by Ms. Delgado and Ms. Gardner about their experiences collaborating.*

*Ms. Delgado:* "We had to collaborate with each other and both of us were still learning the culture of the school. It wasn't easy. Ms. Gardner would sometimes try to treat me like an assistant instead of like her colleague."

*Ms. Gardner:* "Admittedly, at times I was frustrated. Unlike the group that meets with me in the morning, or my last group of the day, I had less flexibility with this second group. Once Ms. Delgado came in, I would have to stop everything and transition into math. Sometimes she wouldn't come in because she was pulled in for a meeting."

*Ms. Delgado:* "I remember a few times when Ms. Gardner did not stop teaching science. The first time, I sat in the back and waited for about 20 minutes before she transitioned into math. The next time it happened, I inserted myself in the lesson. I've always liked math and science; I even took a couple of AP math and science exams during my time in high school. Had I not been knowledgeable about the math and science content, I'm pretty sure she would have totally dismissed me".

*When the principal approached Ms. Delgado about a district professional development opportunity available for her and one of the general education teachers she worked with, Ms. Delgado suggested that she and Ms. Gardner go.*

*Ms. Delgado:* "The district provided substitute funding for both Ms. Gardner and me. The PD was about co-teaching and collaboration between gen ed and special ed teachers. Most of the information and activities were ideas I learned during my teacher prep program. I could tell that it was all new to Ms. Gardner. We reviewed several strategies for co-planning and communicating classroom expectations. She was really into the session. Although I've never really told her this directly, that PD marked a turning point in our collaboration".

*Ms. Gardner:* “I’ve given several PDs for the district and I was impressed by the instructor. The graphic organizers they provided us were really helpful. It was worth the effort”.

### **Questions**

10. Identify at least **one** challenge, according to Ms. Delgado, involved with collaborating with Ms. Gardner?

11. Identify at least **one** challenge, according to Ms. Gardner, involved with collaborating with Ms. Delgado?

12. Based on information from this and prior narratives, in your own words, what are **at least two** other factors that may have contributed to the challenges they faced?

**Narrative E:** By the second semester, Ms. Delgado and Ms. Gardner had established a set routine for co-planning, parental communication, and providing feedback to students. Both teachers were responsible for delivering math instruction for all learners in the 4<sup>th</sup> grade mathematics class.

During her teacher preparation courses and field experience hours, Ms. Delgado learned numerous strategies for differentiating instruction and reaching students who had difficulty grasping a lesson. She would often check in on the students in Ms. Gardner's class who struggled to understand a mathematical concept. By October, both Ms. Delgado and Ms. Gardner were noticing that Abner often required extra support.

Despite the extra support provided by his teachers, and a month tracking his performance on a research-based math software program, Abner showed little learning gains in math. During one of their planning sessions, Ms. Gardner asked Ms. Delgado if she thought that Abner should be recommended for evaluation for special education services.

Abner's family recently moved into the neighborhood. Ms. Delgado and Ms. Gardner each had prior experience working with Spanish speakers and were certified by the state to work with English Language Learners. They had little experience, however, working with students whose home-language is Haitian-Creole.

Ms. Gardner asked Ms. Pierre, a fourth grade teacher who was of Haitian descent, to help translate during an after-school parent conference. The parents were not able to take off work to attend the meeting, but Abner's father had a brief phone conversation with Ms. Pierre. It was evident that his parents had a strong interest in Abner's academic success. The teachers learned that although he was the same age as his peers, before moving to the United States two years ago, Abner had less than one year of formal schooling in Haiti.

**Questions:**

13. What other factor(s), besides Abner's mathematical abilities, may be impacting his understanding of the interventions provided by his teachers? Identify **at least one** and be as specific as possible.

14. Should Abner be evaluated for special education services? Explain why or why not. Be as specific as possible.

## Appendix L

### *Self-Identified Demographic Information of Cognitive Interview Participants*

ID	Major	Grad Date	Gender	Age	Race/ Ethnicity	Childhood Language	Sexual Orientation	Ability Status	Religion	Disability Courses	Diversity Courses	Home Town
A	Elementary		F	25	White Hispanic/Latino	English				1-2	3-4	Miami, FL
B	English	2017	F	20	White Hispanic/Latino	Spanish	Bisexual	N/A	Catholic/ Christian	1-2	1-2	Miami, FL
C	English	2017	F	23	Hispanic/Latino	English	Heterosexual	N/A	Catholic	1-2	1-2	Miami, FL
D	Elementary	2017		20	Mixed Racial Hispanic/Latino	Spanish				1-2	3-4	Miami, FL
E	Elementary	2016	M	22	White	English	Heterosexual			1-2	3-4	Miami, FL
F	ESE	2017	F	21	White Hispanic/Latino	Spanish	Straight	N/A	Christian	1-2	1-2	Hialeah, FL
G	ESE	2017	F	20	White Hispanic/Latino	Spanish	Straight	N/A	Catholic	1-2	1-2	Davie, FL
H	Elementary	2017	F	31	White Hispanic/Latino	Spanish				3-4	1-2	Miami, FL
I	Elementary	2017	F	21	White Hispanic/Latino	English	Straight	None	Agnostic	1-2	1-2	Pembroke Pines, FL
J	Elementary	2017	F	20	Black	English	Heterosexual			5 or more	Not sure	Miami, FL
K	ESE	2017	M	21	Hispanic/Latino	English	Straight		Christian	1-2	1-2	Miami
L	ESE	2016	F	23	Black	English French	Heterosexual		Catholic	1-2	1-2	New York, NY
M	ESE	2017	F	23	White	Serbian	Straight	Totally able	Christian Orthodox	3-4	3-4	Belgrade, Serbia

*Self-Identified Demographic Information of Cognitive Interview Participants Continued*

ID	Major	Grad Date	Gender	Age	Race/Ethnicity	Childhood Language	Sexual Orientation	Ability Status	Religion	Disability Courses	Diversity Courses	Home Town
N	Elementary Education	2017	F	23	White Hispanic Latino	Spanish	Straight	N/A	Catholic	1-2	3-4	Miami, FL
O	Early Childhood	2017	F	22	Hispanic/Latino	Spanish		ADD				
P	Early Childhood	2016	F	45	Hispanic/Latino	Spanish	Male		Catholic	3-4	3-4	Miami, FL
Q	Elementary		F	21	White	English	Straight	-	Catholic	1-2	1-2	Freehold, NJ
R	Elementary	2018	F	21	Hispanic/Latino	Spanish	Straight	Anxiety Disorder	Christian	1-2	1-2	Miami, FL
S	ESE		M	21	Hispanic/Latino	English	Straight	No disability	Christian	1-2	1-2	Hialeah, FL
T	Early Childhood	2017	F	22	White Hispanic/Latino	Spanish	Heterosexual	N/A	Christian	1-2	1-2	Miami, FL

## Appendix M

### ***Intersectional Competence Measure Pilot***

Welcome to the Intersectional Competence Measure Pilot.

I am contacting you today because you shared your e-mail information with me and because I am in the final stages of data collection.

The purpose of this study is to:

- a) identify the indicators that best capture intersectional competence, and
- b) develop and validate an instrument that uses these indicators to measure preservice teachers' intersectional competence and understanding of diversity.

You will be asked to answer a set of questions and to provide feedback on the clarity and relevance of the questions.

The Intersectional Competence Measure should take approximately **45 minutes to an hour** to complete and is divided into three major sections:

- Subset A (multiple choice items)
- Subset B (open-response items)
- Demographic Information

If you have any questions about the purpose, procedures, or any other issues relating to this research study you may contact me by phone, 305-219-4586 or e-mail [mbove001@fiu.edu](mailto:mbove001@fiu.edu) Thank you once again for your participation.

- *Mildred Boveda*

## **ADULT CONSENT TO PARTICIPATE IN A RESEARCH STUDY**

Beyond Special and General Education as Identity Markers: The Development and Validation of an Instrument to Measure Preservice Teachers' Understanding of the Effects of Intersectional Sociocultural Identities

### **PURPOSE OF THE STUDY**

You are being asked to be in a research study. The purpose of this study is to:

- identify the indicators that best capture intersectional competence and
- to develop and validate an instrument that uses these indicators to measure preservice teachers' intersectional competence and understanding of diversity

You are invited to participate in a research study designed to develop and validate the "Intersectional Competence Measure (ICM)". You were selected as a possible participant because you are a preservice teacher who has taken at least one course about meeting the needs of students with disabilities. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

### **NUMBER OF STUDY PARTICIPANTS**

If you decide to be in this study, you will be one of at least 135 people in this research study.

### **DURATION OF THE STUDY**

Your participation will require approximately 60 to 90 minutes of your time— but no more than two total hours.

### **RISKS AND/OR DISCOMFORTS**

There are no known risks to you as a participant.



## **BENEFITS**

The following benefits may be associated with your participation in this study: Opportunity to contribute your expertise and understanding of diversity and/or intersectionality.

### **Potential societal benefits:**

New knowledge about markers of differences and the multidimensionality of diversity, a complex construct. The outcome of the study will be an instrument that will provide an additional evaluative tool for teacher educators and researchers to assess the readiness of preservice teachers to work with diverse colleagues, students, and families.

## **ALTERNATIVES**

There are no known alternatives available to you other than not taking part in this study. However, any significant new Findings developed during the course of the research which may relate to your willingness to continue participation will be provided to you.

## **CONFIDENTIALITY**

The records of this study will be kept private and will be protected to the fullest extent provided by law. In any sort of report we might publish, we will not include any information that will make it possible to identify a subject. Research records will be stored securely and only the researcher team will have access to the records. However, your records may be reviewed for audit purposes by authorized University or other agents who will be bound by the same provisions of confidentiality.

## **COMPENSATION & COSTS**

There is no payment provided for your participation. You will not be responsible for any costs to participate in this study.

## **RIGHT TO DECLINE OR WITHDRAW**

Your participation in this study is voluntary. You are free to participate in the study or withdraw your consent at any time during the study. Your withdrawal or lack of participation will not affect any benefits to which you are otherwise entitled. The investigator reserves the right to remove you without your consent at such time that they feel it is in the best interest.

### **RESEARCHER CONTACT INFORMATION**

If you have any questions about the purpose, procedures, or any other issues relating to this research study you may contact Mildred Boveda at Florida International University, cell: 305-219-4586, [mbove001@fiu.edu](mailto:mbove001@fiu.edu) or [mildredboveda@gmail.com](mailto:mildredboveda@gmail.com).

### **IRB CONTACT INFORMATION**

If you would like to talk with someone about your rights of being a subject in this research study or about ethical issues with this research study, you may contact the FIU Office of Research Integrity by phone at 305-348-2494 or by email at [ori@fiu.edu](mailto:ori@fiu.edu).

### **PARTICIPANT AGREEMENT**

I have read the information in this consent form and agree to participate in this study. I have had a chance to ask any questions I have about this study, and they have been answered for me. I understand that I will be given a copy of this form for my records.

[Click >> to continue](#)

## **Subset A**

**In this section you will find a total of 18 multiple choice questions.**

**At the end of this section, you will be given the opportunity to provide feedback about the questions.**

**Click >> to continue on to Subset A.**

### Question 1

Is student achievement related to the teachers' academic expectations?

Not related at all

Slightly related

Fairly related

Quite related

Extremely relate

### Question 2

Are people with disabilities adequately represented in K-12 textbooks today?

Not represented at all

Slightly represented

Fairly represented

Quite represented

Extremely represented

### Question 3

Is the attention that girls receive from teachers in schools comparable to the attention boys receive?

girls receive much more negative attention than boys

girls receive slightly more negative attention than boys girls receive the same attention as boys

girls receive slightly more positive attention than boys

girls receive much more positive attention than boys

### Question 4

In the United States, is privilege—or unfair advantages and access to opportunities— associated with the combination of masculinity, White skin, and wealth?

not at all associated with that combination

slightly associated with that combination

fairly associated with that combination

quite associated with that combination

extremely associated with that combination

### Question 5

Generally, do school personnel improperly place non-White students in special education classes?

non-White students are never improperly placed at all

non-White students are slightly improperly placed

non-White students are somewhat improperly placed

non-White students are quite often improperly placed  
non-White students are extremely often improperly placed

#### Question 6

Do schools need a racially, ethnically, and linguistically diverse staff?

Do not need at all

Slightly need

Fairly need

Quite need

Extremely need

#### Question 6a

Which schools, if any, have a greater need for a racially, ethnically, and linguistically diverse staff and faculty?

Schools serving predominately White students have a much greater need for a diverse staff and faculty.

Schools serving predominately White students have a slightly greater need for a diverse staff and faculty

All schools need a diverse staff and faculty

Schools serving predominately non-White students have a slightly greater need for a diverse staff and faculty

Schools serving predominately non-White students have a much greater need for a diverse staff and faculty

#### Question 7

Can students living in economically isolated neighborhoods benefit socially and academically from economically integrated classrooms?

Not benefit at all

Slightly benefit

Fairly benefit

Quite benefit

Extremely benefit

Question 8

Should teachers be expected to adjust their preferred mode of instruction to accommodate the needs of all students?

Not expected at all

Rarely expected

Sometimes expected

Often expected

Always expected

Question 9

Do parents and families possess knowledge and expertise that can increase the educational benefits for students?

there are no parents or families who possess knowledge and expertise at all

a slight amount of parents and families possess knowledge and expertise

a fair amount of parents and families possess knowledge and expertise

a great amount of parents and families possess knowledge and expertise

all parents and families possess knowledge and expertise

Question 10

Can teachers' lack of knowledge about racial, ethnic, socioeconomic, and linguistic groups other than their own have a negative impact on the school experiences and academic outcomes of students who are different from the teachers?

No impact at all

Slightly impact

Fairly impact

Quite impact

Extremely impact

Question 11

Is a student's academic success dependent on how hard they work to learn?

No dependent at all

Slightly dependent

Fairly dependent

Quite dependent

Extremely dependent

Question 12

Is examining one's own attitudes and beliefs about age, disabilities, gender, linguistic origin, race, religion, sexuality, and socioeconomic background an important part of learning to be a teacher?

Not important to examine one's attitudes at all

Slightly important to examine one's attitudes

Fairly important to examine one's attitudes

Quite important to examine one's attitudes

Extremely important to examine one's attitudes

Question 13

Is being responsive to cultural and linguistic needs of students as important as addressing reading or mathematical abilities?

Much less important than addressing reading or mathematical abilities

Slightly less important than addressing reading or mathematical abilities

Just as important as addressing reading or mathematical abilities

Slightly more important than addressing reading or mathematical abilities

A lot more important than addressing reading or mathematical abilities

Question 14

Do teachers need to consider if they derive any privilege based on their age, gender, disability status, linguistic origin, race, religion, sexuality, and socioeconomic status to be effective teachers?

No consideration is necessary at all

A little consideration is necessary

Some consideration is necessary

Quite a bit of consideration is necessary

A lot of consideration is necessary

Question 15

For students who immigrate to the U.S. from countries in which a language other than English is the dominant language, is it more important for students to be fully immersed in English in school than to spend time maintaining and developing their native language proficiency?



- Much less important than maintaining native language
- Slightly less important than maintaining native language
- Just as important as maintaining native language
- Slightly more important than maintaining native language
- A lot more important than maintaining native language

Question 16

Should teachers ever group students of the same ability levels together?

- Never group students by ability levels
- Rarely group students by ability level
- Sometimes group students by ability level
- Often group students by ability level
- Always group students by ability level

Question 17

Is helping students question gender role stereotypes when they are evident in instructional materials or within the educational setting part of the responsibilities of the teacher?

- Not part of teacher responsibilities at all
- A small part of teacher responsibilities
- Somewhat part of teacher responsibilities
- Quite a bit a part of teacher responsibilities
- Very much a part of teacher responsibilities

Question 18

Is it part of the responsibilities of a teacher to challenge school arrangements, policies, and practices that maintain social inequalities based on race, ethnicity, social class, language, and/or special needs?

Not part of teacher responsibilities at all

Slightly part of teacher responsibilities

Somewhat part of teacher responsibilities

Quite a part of teacher responsibilities

Very much a part of teacher responsibilities

After reviewing and answering questions 1-18, were there any questions that were not clear or difficult to understand? If so, indicate the question number(s). Please provide any suggestion you may have to clarify the meaning of the question(s).

After reviewing and answering questions 1-18 of Subset A, what is your overall impression of the Intersectional Competence Measure?

You have successfully completed Subset A of the Intersectional Competence Measure.

Click >> to continue on to Subset B.



**Subset B includes a total of Five narratives (A-E) with corresponding open-response items that follow the narratives.**

**Because each narrative builds on the previous one, you may return to previous narratives to answer your questions. For example, you may Find it useful to look at Narratives A and B in order to answer questions in Narrative C.**

**You will be asked to use information from the narrative, as well as what you have learned in your courses and Feld experiences to answer the questions.**

**Click >> to continue to Narrative A.**

**Narrative A:** Palm Tree Elementary School recently marked its 60-year anniversary. The demographic composition of the school has changed substantially throughout the years. When it first opened in the 1950's, all of the students were from White, middle class families; the faculty and staff were also predominately White. Today, with a student population that is 91% Black/African American and 7% Hispanic, 95.7% of Palm Tree Elementary students are eligible for free and reduced lunch. Approximately one third of the administrators and teachers are Black/African American, one third are Hispanic, and one third are White.

The cafeteria, custodial, and security staff are predominately Black/African American, as are the members of the office personnel.

School district administrators have identified Palm Tree Elementary School as needing additional district-level support and supervision. For the past three years, Palm Tree Elementary School performed below the district average on the state's math and reading assessments. In addition, the principal and assistant principals are concerned about a pattern that has recently developed. The enrollment at Palm Tree has been on the decline, especially after two charter schools opened up in the neighborhood. Many of the students that are leaving Palm Tree are students from the talented and gifted program, which typically have some of the school's most engaged families.

There are a total of 540 Kindergarten through fifth grade students enrolled at Palm Tree Elementary. Currently, 6% of the students are identified as gifted and 14% are in special education. The percentage of English Language Learners, currently at 8%, has subtly increased as Central American and Haitian immigrant families have moved into the neighborhood.

Table 1. Demographic Information: Percentage of public school students per enrollment

	Palm Tree	District	State
% Asian/Pacific Islander	0	1	3
% Black/African American	91	24	20
%Hispanic/Latina/o	7	66	29
%White	1	8	45
%Native American	0	0.5	0.5
% Other	1	0.5	2
% Free/Reduced Lunch	96	74	57
%English Language Learners	8	29	8
%Special Education	14	12	1
%Gifted	6	7	6

Table 2. Teacher Demographics: Percentage of public school teachers

	Palm Tree	District	State
% Asian/Pacific Islander	0	2	2
% Black/African American	30	28	7
%Hispanic/Latina/o	33	47	8
%White	37	22	82
%Native American	0	0	0.5
% Other	0	1	0.5

Question 1

What information, trends, or statistics identified in Narrative A --including Table 1 and Table 2 -- do you believe are related to the school's performance on the state assessments? Explain why the information, trends, or statistics you identified are important to take into consideration.

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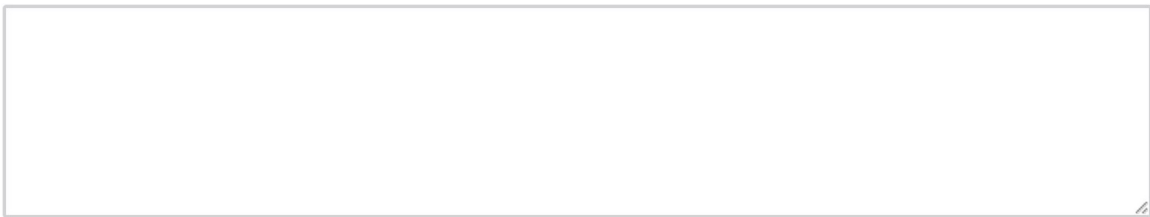
**Narrative B:** Maya Delgado is a first year teacher who recently graduated with a B.S. in Special Education. Ms. Delgado was the first person in her family born in the United States; her parents and older siblings were born in Honduras, a country in Central America. She considers herself to be Afro-Latina, identifying with both her African and Latin American heritage. Although Spanish was her first language, today Ms. Delgado, her husband, and her daughter primarily speak English at home. Ms. Delgado was motivated to become a special education teacher because she strongly believes that education is a social justice issue. She desires to be in a profession in which she can help to improve the opportunities available for others.

During her teacher preparation program, Ms. Delgado completed over 100 field hours in six schools across the district. Ms. Delgado was excited to learn that her first teaching assignment was close to her old neighborhood. She grew up less than a mile away from Palm Tree Elementary School and went to middle and high school with several of the students' parents. Ms. Delgado's daughter is in pre-Kindergarten and, although she now lives in a different neighborhood, she has decided to enroll her daughter at Palm Tree.

Ms. Delgado is one of two special education teachers at the school. She is responsible for the services provided to 15 third and fourth grade students, all who spend 80% or more of the school day in the general education classroom. Twelve of the students are African American boys and one student is a Hispanic boy who is also an English Language Learner. Of the two girls who are assigned to Ms. Delgado, one is African American and the other is White. Ms. Delgado co-teaches with four general education teachers and typically spends an hour a day in each of their classrooms. In addition to co-teaching and providing support facilitation, Ms. Delgado has weekly consultations with three general education teachers.

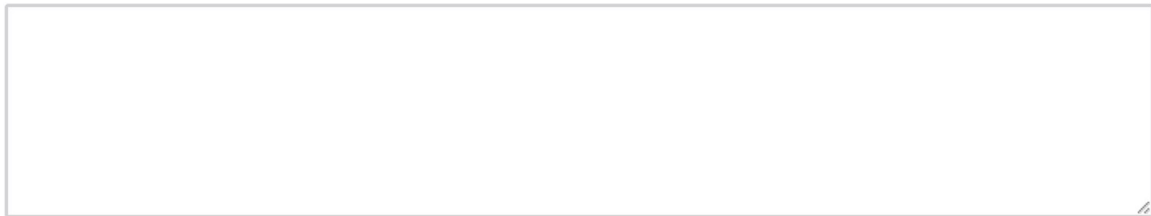
Question 2

What are **at least two** features of Ms. Delgado's *personal* experiences and/or background that would be an asset to the faculty, students, and families of Palm Tree Elementary? Explain why and be as specific as possible.



Question 3

What is **at least one** feature of Ms. Delgado's *professional* training and experiences that would be an asset to the faculty, students, and families of Palm Tree Elementary? Explain why and be as specific as possible.



**Narrative C:** Catherine Gardner has taught for 22 years and is a National Board Certified

Teacher. Like Ms. Delgado, this is her first year at Palm Tree Elementary School. Ms. Gardner proudly hails from a family of teachers. She grew up in a small town in the Midwest with a relatively homogeneous community of people. Most families were descendants of immigrants who migrated to the area in the 19th century from Sweden, Norway, Denmark, and Germany. After graduating high school, Ms. Gardner decided to move out of her state and attend a university in a large urban city. During her time at the university, Ms. Gardner met her future spouse and eventually made the choice to stay in the city. Ms. Gardner became fluent in Spanish, making an effort to learn the language because most schools she worked in had large populations of families from Latin America.

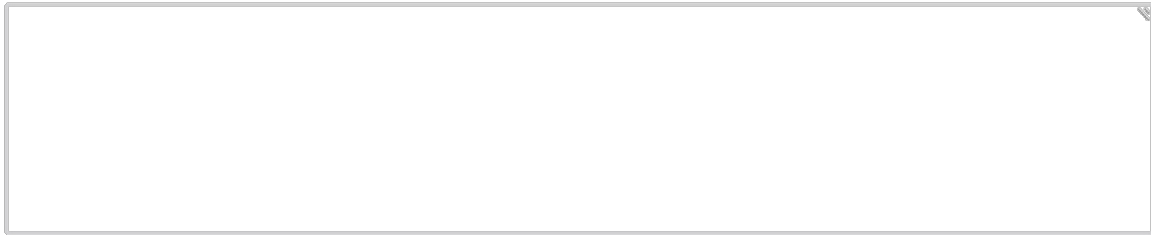
Prior to Palm Tree Elementary, Ms. Gardner was a mathematics teacher at a high school located in the southern part of the district. She taught honors and Advance Placement classes and received numerous awards and recognitions for her teaching. The principal of Palm Tree Elementary actively recruited Ms. Gardner, along with three other veteran teachers, in an effort to produce better results on the state's math and reading assessment. Ms. Gardner is passionate about mathematics and insists on creating opportunities for students to engage in hands-on activities.

The upper elementary grades are compartmentalized by subject areas. Ms. Gardner is responsible for teaching math and science to three groups of fourth graders. Within the second group that meets with her for two hours daily, there are four students with Individualized Education Plans (IEPs). Ms. Delgado comes in for one hour to provide support facilitation in mathematics. To accommodate Ms. Delgado's

schedule, Ms. Gardner does her best to transition between science and math at the same time each day.

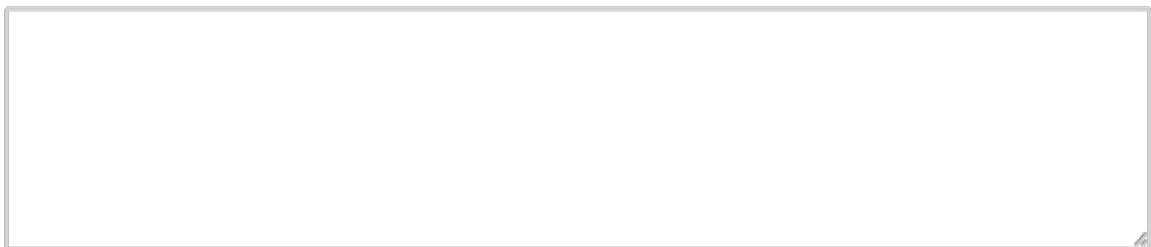
Question 4

What are **at least two** features of Ms. Gardner's *personal* experiences and/or background that would be an asset to the faculty, students, and families of Palm Tree Elementary? Explain why the features you identified are assets. Be as specific as possible.



Question 5

What is **at least one** feature of Ms. Gardner's *professional* training and experiences that would be an asset to the faculty, students, and families of Palm Tree Elementary? Explain why the feature you identified is an asset. Be as specific as possible.



Question 6

Ms. Delgado and Ms. Gardner are colleagues who collaborate on a daily basis. After reading about their respective backgrounds,

what are **two** potential benefits, (that is, for students, families, and each other) of their collaborative efforts?

What is **one** potential challenge?

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**Narrative D:** *The first four weeks of the school year were especially challenging for both Ms. Delgado and Ms. Gardner. The following contains comments made by Ms. Delgado and Ms. Gardner about their experiences collaborating.*

*Ms. Delgado:* "We had to collaborate with each other and both of us were still learning the culture of the school. It wasn't easy. Ms. Gardner would sometimes try to treat me like an assistant instead of like her colleague".

*Ms. Gardner:* "Admittedly, at times I was frustrated. Unlike the group that meets with me in the morning, or my last group of the day, I had less flexibility with this second group. Once Ms. Delgado came in, I would have to stop everything and transition into math.

Sometimes she wouldn't come in because she was pulled in for a meeting."

*Ms. Delgado:* "I remember a few times when Ms. Gardner did not stop teaching science. The first time, I sat in the back and waited for about 20 minutes before she transitioned into math. The next time it happened, I inserted myself in the lesson. I've always liked math and science; I even took a couple of AP math and science exams during my time in high school. Had I not been knowledgeable about the math and science content, I'm pretty sure she would have totally dismissed me".

*When the principal approached Ms. Delgado about a district professional development (PD) opportunity available for her and one of the general education teachers she worked with, Ms. Delgado suggested that she and Ms. Gardner go.*

*Ms. Delgado:* "The district provided substitute funding for both Ms. Gardner and me. The PD was about co-teaching and collaboration between gen ed and special ed teachers. Most of the information and activities were ideas I learned during my teacher prep program. I could tell that it was all new to Ms. Gardner. We reviewed several strategies for co-planning and communicating classroom expectations. She was really into the session. Although I've never really told her this directly, that PD marked a turning point in our collaboration".

*Ms. Gardner:* "I've given several PDs for the district and I was impressed by the instructor. The graphic organizers they provided us were really helpful. It was worth the effort".

Question 7

Identify at least **one** challenge, according to Ms. Delgado, involved with collaborating with Ms. Gardner?

Question 8

Identify at least **one** challenge, according to Ms. Gardner, involved with collaborating with Ms. Delgado?

Question 9

What are **three** skills or strategies that the teachers will need to enact in order to have a successful partnership?

**Narrative E:** By the second semester, Ms. Delgado and Ms. Gardner had established a set routine for co-planning, parental communication, and providing feedback to students. Both teachers were responsible for delivering math instruction for all learners in the 4th grade mathematics class.

Despite the extra support provided by his teachers, and a month tracking his performance on a research-based math software program. During her teacher preparation courses and field experience hours, Ms. Delgado learned numerous strategies for differentiating instruction and reaching students who had difficulty grasping a lesson. She would often check in on the students in Ms. Gardner's class who struggled to understand a mathematical concept. By October, both Ms. Delgado and Ms. Gardner were noticing that Abner often required extra support.

Abner showed little learning gains in math. During one of their planning sessions, Ms. Gardner asked Ms. Delgado if she thought that Abner should be recommended for evaluation for special education services.

Abner's family recently moved into the neighborhood. Ms. Delgado and Ms. Gardner each had prior experience working with Spanish speakers and were certified by the state to work with English Language Learners. They had little experience, however, working with students whose home-language is Haitian-Creole.

Ms. Gardner asked Ms. Pierre, a fourth grade teacher who was of Haitian descent, to help translate during an after-school parent conference. The parents were not able to take off work to attend the meeting, but Abner's father had a brief phone conversation with Ms. Pierre. It was evident that his parents had a strong interest in Abner's academic success. The teachers learned that although he was the same age as his peers, before moving to the United States two years ago, Abner had less than one year of formal schooling in Haiti.




Question 10

What other factor(s), besides Abner's mathematical abilities, may be impacting his understanding of the interventions provided by his teachers? Identify **at least one** and be as specific as possible.

A large, empty rectangular box with a thin grey border, intended for the student's answer to Question 10. A small diagonal slash icon is visible in the bottom right corner of the box.

Question 11

Should Abner be evaluated for special education services? Explain why or why not. Be as specific as possible.

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## VITA

### MILDRED BOVEDA

Born Miami, Florida

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