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Measuring Cultural Competency in Educators: The Educators Scale of Student Diversity

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Signature 

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Dedication

This work is dedicated to my grandparents: Dada, Dhaiba, and Vimlaba. My success is the product of your love, support, and protection over three continents and almost one hundred years.

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Abstract

The purpose of this study was to uncover a rich theoretical basis of cultural competency and awareness in education and create an instrument, Educators Scale of Student Diversity (ESSD), which reliably and validly measures cultural competency in educators. Current measures lack in both a wide theoretical basis of cultural competency as it relates to educators in diverse teaching environments and in reported psychometric quality. The ESSD derived from a wide range of theoretical constructs that encompass the experience of modern teachers in diverse environments.

The original 50 items, which were written after an extensive literature review, were reviewed by a panel of experts in the fields of cultural competency and race in education, resulting in a 48-item instrument. A pilot study of 372 K-12 teachers in a medium-sized public school district in the Pacific Northwest was then conducted. A factor analysis resulted in a 22-item instrument consisting of 4 subscales: Race and Bias, Culturally Responsive Instruction, Sociopolitical Context, and Diversity in Education. Cronbach's alpha, an assessment of reliability, was .88 for the scale, suggesting reliability. A correlational analysis was performed with the Cultural Diversity Awareness Index to establish convergent validity and showed a moderate positive relationship.

CHAPTER I: INTRODUCTION

Background of Study

The United States educational system faces a stark mismatch of teacher demographics and student demographics. 82% of teachers are White, while only 50% of students are White. Twenty-five percent of students are Hispanic, 15.6% are Black and 4.8% are Asian. Only 7.8% of teachers are Hispanic, 6.8% are Black and 1.8% are Asian (National Center for Education Statistics [NCES], 2012). If a student is not White, there is a high probability that his or her teacher will not share the same cultural and ethnic background.

Along with this mismatch of ethnic and cultural background between teacher and student, the educational system also suffers from an achievement gap based on those same demographics. Black and Hispanic students continue to achieve in math and reading at lower levels than White students. This achievement gap exists throughout the entire K-12 system. Though the aforementioned achievement gaps are slowly closing, they still remain higher than half a standard deviation and can be as high as a full standard deviation (Center for Education Policy Analysis [CEPA], 2016).

Pai (1990) argues that education is a sociocultural process, not only for the learner but for the teacher as well. As culture pervades every part of a person's beliefs and behaviors, it is only logical that a teacher's culture also influences their education philosophy and pedagogy. For example, a teacher raised in a culture that values the power of authority and does not value questioning authority will reflect those same values in their teaching philosophy, possibly resulting in a harsh disciplinarian. Just as the learning process has been shown to be influenced by a student's culture, teaching is

similarly influenced by a teacher's culture (Pai, 1990). If students of color are regularly taught by teachers of a different culture and ethnicity from their own, are the practices of the teacher aligning with the cultural learning needs of the students?

A mismatch of cultural backgrounds does not necessarily result in lower academic outcomes for students of color. Though students of color who are taught by teachers of similar cultural and ethnic backgrounds perform better than those taught by White teachers, White teachers who practice culturally responsive teaching can bridge the cultural gap (Banks, 2001; Gay, 2010; Sleeter, 2008). For teachers to be effective in teaching in a culturally responsive manner, they must be culturally competent in the context of their students and an increasingly diversifying society.

Theoretical Overview

A common model of cultural competency consists of three spiraling components: awareness, knowledge, and skill. Cultural awareness refers to a person's accurate and appropriate attitudes, opinions, and assumptions about various cultures (Sue & Sue, 2012). An unwillingness to confront these attitudes and values leads to cultural bias, which can have a negative effect on students. Cultural awareness requires constant reflection on one's own attitudes towards cultures different than one's own and how one's own culture affects those attitudes. In other words, a person views other cultures through the lens provided by their own culture. A culturally aware individual understands that culture affects viewpoints, therefore other people may have varying viewpoints based on culture. Cultural knowledge refers to the comprehension of the cultures that one may interact with in both personal and professional settings. An effective teacher of various cultural groups must have knowledge of the cultural norms of their students. Finally,

cultural skill is the ability to effectively and unbiasedly interact with people from different cultures (Pedersen, 2009).

Three additional theoretical constructs support cultural competency in the context of educators: culturally responsive instruction, multicultural education, and critical race theory. Culturally responsive instruction is a framework for greater cultural inclusion in the classroom, based on the assumption that students learn better and are more engaged when content directly connects to their lived experiences (Gay, 2010). A similar framework is Ladson-Billings' (1995) culturally relevant pedagogy, which also aims to empower minority students by embracing the cultural and social capital the students bring to school. Both frameworks set high expectations for students in hopes to combat deficit thinking that pervades some educational settings. They also value student culture and attempt to reconcile home culture with school culture.

Multicultural education revolves around the understanding that some students have a better chance of succeeding in our current educational system than others. This disparity is due to social and cultural differences that must be addressed to provide an equitable educational experience for all students (Banks & Banks, 2004; Sleeter, 2001). Closely related to Critical Race Theory, multicultural education consists of five dimensions that will be discussed further in Chapter Two: content integration, knowledge construction, equity pedagogy, prejudice reduction, and empowering school culture. These dimensions come together to form a welcoming and equitable educational environment that mitigates the adverse effects of systemic educational inequality (Banks, 2012).

Critical Race Theory (CRT) is a theoretical framework that rests upon the idea that racism is an ordinary and pervasive force in all aspects of society (Delgado & Stefanic, 2012). Critical Race Theorists argue that institutions are built upon the social construct of race and a white-over-color attitude when faced with equity-based reforms. CRT also purports that society creates a false sense of fairness across all citizens. In education, this translates to a meritocratic system of education in which students are constantly told that they only need to work hard to succeed in school and life, ignoring the social and economic detriments that many students of color face in the form of institutional racism.

These theoretical constructs encompass the concept of cultural competency as it relates to educators of diverse students. The constructs of multiculturalism and critical race theory deal with a teacher's understanding of how ethnicity and culture play into students' interactions with the institution of education and society as a whole. An understanding of these concepts and their greater implications gives teachers the awareness and knowledge to better attend to the needs of diverse students in a system that is built on the model for middle class White students (Sleeter, 2001). The constructs of cultural awareness and culturally responsive teaching pertain to the cultural needs of students as learners. Cultural awareness provides teachers an understanding of their own biases and how those biases can affect their students as learners. Culturally responsive teaching provides a framework for teachers to deliver instruction that harnesses students' cultural capital in the learning process.

Attempting to measure these constructs in educators is important because of the increasingly diversifying student population of the United States public schools. The

teacher population is not diversifying nearly as quickly, which only increases the cultural gap between teacher and students. Measuring the constructs that derive cultural competence in educators can provide school leaders with valuable information to target professional development. It can also be used to direct teacher education programs to produce graduates with valuable skills in working with diverse populations with different cultural and racial backgrounds. Though instruments exist that specifically target educators, they do not completely cover the theoretical breadth that embodies cultural competence in the current educational and societal climate.

Problem Statement

Though measures of cultural competency and awareness of diversity currently exist, there are gaps in both theoretical basis and psychometric quality. One of the most widely used measures of cultural competency is the Cultural Diversity and Awareness Inventory (CDAI) (Henry, 1986). The CDAI was designed to measure attitudes and beliefs of educators towards culturally diverse students. The original published document offers no information on the reliability or validity of the instrument. It also derives from a narrow definition of culture that ignores systemic issues of race and resulting inequalities caused by racism. The Cultural Awareness and Beliefs Inventory (CABI) (Webb-Johnson & Carter, 2005) has a larger theoretical base than the CDAI, though it still does not include ideas from Critical Race Theory or multiculturalism. Natesan, Webb-Hasan, Carter, and Walter (2011) did perform a mixed methods study to measure the reliability and validity of CABI, providing evidence of both. Content validity was established through consultation with a panel of experts and a principal component analysis resulted in an eight-factor solution over 36 items. Cronbach's alpha was 0.83, indicating an

adequately reliable instrument (Trochim, 2006). The instrument was primarily designed for teachers of predominantly African American populations, which is a major limitation in the study. As the instrument was designed for African American populations, it may not be appropriate for use in more diverse and multicultural settings.

The Teacher Multicultural Attitude Survey (TMAS) (Ponterotto, Baluch, Greig, & Rivera, 1998) attempts to measure multicultural awareness and sensitivity. The developer established validity through both an expert panel and correlational analysis and reliability by calculating Cronbach's alpha, which was 0.82. Like previously discussed instruments, however, the theoretical scope was limited to multicultural education and cultural awareness. The Teaching in Urban Schools Scale (TUSS) (Swartz & Bakari, 2005) measures knowledge of urban teaching and diversity. The TUSS is a knowledge based instrument consisting of yes or no questions. Some validity and reliability measures were established in the study, though the scope was narrowed to teaching in urban settings. Pohan and Aguilar (2001) created a two-part survey to measure both personal and professional beliefs regarding issues of diversity for educators. Multiple studies have suggested high validity and reliability for the survey and there are fewer theoretical gaps than in previously described studies. However, as in the case of previously discussed instruments, there is little mention of Critical Race Theory in the context of education. Therefore, there is a need for a new psychometrically sound instrument that measures cultural competency in educators of diverse populations based on a wider range of theoretical constructs.

Purpose of the Study

The purpose of this study was to uncover a rich theoretical basis of cultural competency and awareness in education and create an instrument, The Educators Scale of Student Diversity (ESSD), which reliably and validly measures cultural competency in educators. Current measures lack in both a wide theoretical basis of cultural competency as it relates to educators in diverse teaching environments and in reported psychometric quality. The ESSD derived from a wide range of theoretical constructs that encompass the experience of modern teachers in diverse environments. It also followed suggested steps in scale creation that measure multiple types of validity and reliability (Governmental Accountability Office, 1998; Netemeyer, Bearden, & Sharma, 2003; Pett, Lackey, & Sullivan, 2003).

Research Questions

1. Is the Educators Scale of Student Diversity a reliable instrument?
2. Is the Educators Scale of Student Diversity a valid instrument?
3. Are there differences in scores based on the demographic variables of race and ethnicity, gender, years of experience in K-12 settings, and school level?

Research Design

This dissertation followed the research design for the creation of a reliable and valid instrument. The first phase of the study consisted of a literature review to uncover the theoretical constructs that would serve as factors for the instrument. The items of the instrument came in the form of statements that derive from the theoretical constructs of the literature review. Participants responded to statements on a five-point Likert type scale. Initial content validity was established through a panel of experts in multicultural education and cultural competency reviewing the items for faithfulness to the theoretical

constructs and the practice of education of diverse learners. Once their review notes had been considered and items had been edited, the instrument was administered to the teachers of a medium sized K-12 school district in the Pacific Northwest. Along with the ESSD, the CDAI was also administered to later establish convergent validity. Once the data were collected, a factor analysis was performed on the ESSD items to identify factors and further support validity. Each item was analyzed for its overall contribution to the instrument to determine which items to discard and retain. A correlational analysis was also performed against the results of the CDAI to establish convergent validity. Reliability statistics were calculated through Cronbach's alpha to establish internal consistency of the instrument. A multivariate analysis of variance (MANOVA) was performed to determine if there were any statistically significant differences by demographic variables.

Summary

This chapter discussed the introductory elements of the dissertation study, including the background, problem statement, and purpose of the study. Chapter 2 consists of a literature review of theoretical constructs and related empiricism. Chapter 3 provides a detailed explanation of the methodology of the study. Chapter 4 consists of the results of the study. Chapter 5 is the analysis and discussion of the results, including a discussion of the limitations and suggestions for further avenues of research.

CHAPTER II: REVIEW OF THE LITERATURE

Introduction

In her book *Culturally Responsive Teaching*, Geneva Gay (2010) called for a stop to the disempowerment of students of color, which results in disproportionally high levels of low achievement. Though many factors such as funding, policy making, and poverty contribute to inequity in schools, purposeful changes in how students from varying backgrounds are taught have been shown to help close the achievement gap and increase achievement. And yet over sixty years after the Supreme Court ordered integration of the country's public schools, students of color are still disproportionately underachieving when compared to their White counterparts (American Psychological Association [APA], 2012).

When legal school segregation ended, it paved the way for integrated schools and minority students sitting in class next to their White counterparts (Brown v. Board of Education, 1954). As desegregation efforts swept the country, educational leaders looked for ways to better integrate classrooms. Despite these efforts, American schools are currently still sharply segregated. Orfield and Lee (2006) contended that White students attend schools in which 78% of the student body is White, while students of color attend schools that are more likely to be less White. This trend towards segregated schools has been steadily increasing since the late 1970s and negatively affects students in a number of ways (Gay, 2010). Teachers in schools of mostly students of color tend to have

different expectations and pedagogical techniques than teachers in mostly White schools. These include pedagogies that focus on preparing students for standardized assessments, many of which are graduation requirements (Rowley, Kurtz-Costes, & Cooper, 2010). This practice reduces creativity and motivation in students, leading to disengagement with school and the learning process as a whole (Duncan-Andrade & Morrell, 2008; Emdin, 2016). Segregation is not only a matter of ethnicity but also socioeconomic status and similar patterns of inequity can be extrapolated from those of ethnic or racial segregation. In addition, socioeconomic segregation is correlated with ethnic or racial segregation, furthering educational inequities (Lee & Burkam, 2002).

A narrow definition of culture is limited to ethnographic variables, nationality, ethnicity, language, and religion (Pedersen, 2009; Sue & Sue, 2012). A more broad definition of culture contains a person or group's whole social system, which comprises of various grouping variables such as demographics, status, and group affiliation. Pederson (2009) identified a dichotomy of culture, objective and subjective culture, to assist in understanding. Objective culture refers to visible, identifiable behaviors or artifacts that are culturally learned and can be identified by persons outside of that cultural group. Subjective culture refers to internalized attitudes and opinions that members of a cultural group hold, which are much more difficult to identify and measure by those outside of that group. In the context of cultural awareness, it is vital to move the focus from objective culture to subjective culture, especially for educators that interact with children of varying cultural backgrounds. Though identifying objective cultural symbols is much easier, knowledge of subjective culture results in a better understanding of a student's cultural value in the learning environment.

Liang and Zhang (2009) explored various indicators of cultural competence in pre-service teachers using five factors that play a role in its development: openness to diversity, intercultural experiences and beliefs, self-awareness, educational background, and commitment to social justice. Using structural equation modeling, they found that four dimensions inform cultural competence: professional beliefs, self-reflection, teacher expectations, and actions to mitigate discrimination. The researchers also noted that cultural competence based on these four dimensions is an evolving process from cognition to affection and ending in action. Like the relationship between cultural awareness, knowledge, and skill, it is not a linear process, as growth in one step fuels growth in others. Liang and Zhang's (2009) conclusion was the addition of action in the form of mitigation of discrimination in the educational setting to the construct of cultural competence, which is a central tenet of culturally responsive instruction.

Culturally Relevant Pedagogy

Many studies show the benefit of culturally relevant pedagogy in diverse classrooms (Camangian, 2013; Irvine, 2010; Milner, 2010, 2014; Morrison, Robbins, & Rose, 2008; Osborne, 1996; Wortham & Contreras, 2002). The idea of teaching students with cultural relevance in mind began to evolve during the era of Brown vs. Board of Education (1954). Schmeichel (2012) examined the role of culture in the classroom over time and found different iterations of what she called the "discourse of difference" (p. 213). In the years after the Brown decision, some educators framed the poor performance of students of color as cultural deprivation or disadvantage, or the idea that a difference in culture of students of color and society was the root problem. The notion of cultural deficit that only focused on the difference or deprivation between societal White culture

and the broad and obviously misnamed "other" culture was held in prominence through the 1970s. Schmeichel (2012) noted that the late 1980s saw a sharp rise in scholarship that referenced cultural relevance as a more tailored educational experience that was highly dependent on the culture of the student as a form of identity. These works eventually came together in Gloria Ladson-Billings' work in the early 1990s.

The framework of culturally relevant pedagogy that educators reference today originated with the work of Ladson-Billings (1995) and consists of three tenets that aim to empower minority students: academic achievement, cultural competence, and critical consciousness. These three tenets can be observed at many different levels of the education system but they work together to build an environment in which the culture of the learner is vital to the educational process (Camangian, 2013). This approach embraces the cultural and social capital the students bring to school, which benefits all students participating in the learning process, as they are all exposed to different viewpoints that their peers bring to the process (Brown-Jeffy & Cooper, 2011). One benefit of considering the cultural backgrounds of students is an increase in academic achievement. When correctly implemented, culturally relevant pedagogy has been shown to help students develop skills that support academic achievement (Ladson-Billings, 1995; Milner, 2010, 2017, Scott & White, 2013). At the classroom, building, or system levels, this can translate to a teacher's high standards and expectations for all students, which has been shown to be associated with an increase in academic achievement.

Cultural competence refers to the utilization of students' culture in curricular and instructional decisions (Ladson-Billings, 1995). Examples of cultural competence include teaching poetry to African-American students using rap lyrics or biology to Mexican-

American students by exploring the ecosystems of Central America. Providing a foothold for students to better understand both the subject matter and their own cultural identity results in more engagement and achievement (Milner, 2012). Some researchers also place the importance of the student-teacher relationship under cultural competence, as it helps the teacher better understand the specific culture of their students that can later be accessed during the learning process (Gay, 2010; Ladson-Billings, 1995). Cultural competence also refers to the students' ability to acquire cultural knowledge, both their own and others, and understand that these differences in culture have a positive impact on society. A teacher practicing this tenet of culturally relevant pedagogy finds ways to let students explore their own cultural backgrounds in the context of the curriculum and share these experiences with other students to build a safer and more open environment in a classroom (Love, 2015; Petchauer, 2015). This also shows students that culture is not monolithic but displays within group variance, which can help mitigate stereotype and biases that may arise during these formative years (Milner, 2017).

Critical consciousness refers to developing a broader consciousness that questions cultural norms, values, and social institutions and is generally the most difficult of the three tenets for educators to meet. Banks and Banks's (1995) scholarship on equity pedagogy strongly connects to culturally relevant pedagogy, as he contended that in addition to helping students function within the dominant canon, pedagogy should train students to question society's assumptions, paradigms and hegemonic characteristics, all skills of responsible citizens in a democratic society. More importantly, the emphasis on equity turns students into agents of social change (Banks & Banks, 1995). For students to look at the world in a critical and questioning manner, the teacher must first be able to do

the same. Specifically, Ladson-Billings (1995) identified the questioning of structural inequality, racism, and injustice of societal systems that students operate in, including the educational system, to be a crucial component of building critical consciousness in students. Both Ladson-Billings (1994) and Young (2010) found that teachers tend to be unprepared to discuss these ideas. Young (2010), in interviews with teachers about the role of culturally relevant pedagogy in their work, found that teachers do not even mention the importance of critical consciousness in their lesson planning, which confirms the difficulty of implementing this particular tenet of culturally relevant pedagogy.

More recently, culturally relevant pedagogy has seen a shift towards culturally sustaining pedagogy (Ladson-Billings, 2014; Paris, 2012; Zoch, 2017). Culturally sustaining pedagogy continues the practices of culturally relevant pedagogy but pushes the concept of cultural competence further by focusing on perpetuating pluralism seen in classrooms all over the country while still teaching students how to access and succeed in the dominant cultures. Teachers and students work and grow together to sustain the cultures that they represent, hence the name culturally sustaining pedagogy. This shift is seen both as an evolution from culturally relevant pedagogy and pushback against societal attitudes and climates that seek to oppress non-dominant cultural values and linguistic diversity, such as English-only policies or banning ethnic studies curricula in some parts of the country (Paris, 2012).

Culturally Responsive Teaching

Another framework for greater cultural inclusion in the classroom comes from Geneva Gay's research on Culturally Responsive Teaching. Gay (2010) identified culturally responsive teaching as "using cultural characteristics, experiences, and

perspectives of ethnically diverse students as conduits for teaching them more effectively" (p. 106). This framework centers on teaching culturally diverse students. It is based on the assumption that students learn better and are more engaged when content directly connects to their lived experiences. Culturally responsive teaching consists of six behaviors associated with culturally responsive teachers (Gay, 2010). According to Gay (2010), culturally responsive teachers are:

1. Socially and academically empowering, setting high social and academic expectations for students;
2. Multidimensional, engaging various cultural knowledge bases, perspectives, and histories into their teaching;
3. Validating of students' cultures, using multicultural curricula to reconcile differences between home and school;
4. Socially, emotionally, and politically comprehensive in educating the whole child;
5. Transformative of schools and societies by harnessing students' funds of knowledge to drive curriculum and instruction; and,
6. Liberating from oppressive educational practices and ideologies by pushing students to think critically about their role in social institutions and practices. (pp. 29-36)

These tenets, though similar to Ladson-Billings' ideas on culturally relevant pedagogy, focus on the act of teaching and the relationship between student and teacher rather than just the curriculum (Aronson & Laughter, 2016).

Cultural Competency

A common model of cultural competency used in counseling and psychology consists of three components: awareness, knowledge, and skill. The first, cultural awareness, refers to accurate and appropriate attitudes, opinions, and assumptions about various cultures. Cultural awareness requires knowledge of one's own biases towards other cultures and an understanding of objective cultural symbols. Sue and Sue (2012) argued that cultural awareness also includes the ability to judge a situation from another culture's viewpoint. Cultural awareness requires constant reflection on both one's own and others' cultural heritage and respect of cultures that are markedly different from one's own, which can be an uncomfortable experience.

Unwillingness to reflect on and confront attitudes that may result in implicit cultural bias prevents movement from cultural awareness to cultural knowledge, the next component in cultural competency. Cultural knowledge refers to the comprehension of the cultures that one may interact with in personal and professional settings. For example, a teacher who teaches Native American students should know that the Native American family structure tends to include extended family in the basic family unit, which differs from the Western nuclear family unit. Aunts, uncles, and grandparents often raise children, as well as parents. When communicating with families, having this specific cultural knowledge can improve communication with the adults who oversee learning at home, which benefits the student and the family (Sue & Sue, 2012). Cultural knowledge also refers to the awareness that cultural differences exist within groups because culture also has an individual aspect influenced by experience and worldview. For example, not all Native American groups will have large family units that include extended family. Also, a teenager of Mexican heritage that grows up in a neighborhood with mostly

African American families may identify with both cultures. It is important for teachers to learn about specific cultural differences that may also exist in the populations from which their students come. The variability of culture between and within different cultural groups makes building cultural knowledge difficult but a crucial component of the learning environment. It also shows that the process of building cultural knowledge is an ongoing process.

Finally, cultural skill refers to the ability to interact with people of different cultures in an unbiased and productive manner. The most difficult component in achieving full cultural competence, cultural skill requires the awareness and knowledge to effectively communicate, both verbally and nonverbally, with people from varying cultural backgrounds (Pederson, 2009). For example, Asian American families tend to prefer formal relationships with teachers with specific suggestions on how to improve their children's academic performance, as educational excellence is highly valued in many Asian American cultures. A teacher with this knowledge and awareness of cultural norms would communicate with the parents accordingly (Sue & Sue, 2012).

An incomplete grasp of cultural awareness leads to cultural bias, which can take different forms (Pederson, 2009). One example would be conflict between the value of independence and individualism versus dependence and communality, commonly a difference between Western and Eastern cultures. Western cultures tend to value individualistic characteristics and devalue communality and dependency. In contrast, some Eastern cultures, such as Japanese culture, value the group and family over the individual. Dependency on the family is not seen as a weakness of character as it is viewed in the West (Pederson, 2009). Cultural biases are usually not explicit but can

result in implicit behaviors that convey a hostile and unwelcoming atmosphere, known as microaggressions (Sue & Sue, 2012). These behaviors are commonly subtle and unintentional but can result in harmful psychological impact on underrepresented minorities. Though microaggressions result from ingrained bias, cultural awareness and skill building can help prevent them. A lack of cultural awareness can also lead to contemporary forms of oppression, such as antigay, transphobic, sexist, and Islamophobic attitudes.

Biases that get ingrained into society can also have a negative impact on the people that are constantly exposed to such negative attitudes. Stereotype threat, a related phenomenon, refers to a situation in which a person feels like they must conform to the social stereotypes of their cultural or ethnic group. Stereotype threat reduces the performance of individuals, causing anxiety and underselling an individual's true ability and potential (Steele, 2010). Studies show the negative effects of stereotype threat, especially stereotypes based on gender and race (Steele, 2010; Steele & Aronson, 1995). Stereotype threat can be battled, as Steele (2010) showed in a career of studies, but requires an environment in which students feel as if stereotypes are absent. When measures are taken to create an inclusive, culturally responsive learning environment, the effects of stereotype threat are diminished, therefore, allowing students to perform to their fullest potential.

Lindsey, Robins, and Terrell (2003) identified a continuum of cultural proficiency that describes ways of interacting with differences in cultures for educators: cultural destructiveness, cultural incapacity, cultural blindness, cultural precompetence, cultural competence, and cultural proficiency. Cultural destructiveness consists of identifying and

subsequently eliminating other, non-dominant cultures. Cultural incapacity consists of identifying non-dominant cultures and creating a system of superiority that disempowers non-dominant cultures. Cultural blindness consists of behaving as if there are no cultural differences, even though the individual is aware of the differences. Cultural precompetence consists of inadequate responses to cultural differences, such as "celebrations of cultures" that are often seen in classroom settings. Cultural proficiency, which is higher on the continuum than cultural competence, consists of educators that understand how cultural differences can impact their students and are skilled in interacting with cultures different than their own in a non-threatening and productive manner. When compared to Sue and Sue's (2012) classification of cultural competency, cultural proficiency most closely relates to an individual with high levels of cultural knowledge and skill in a particular cultural group that they interact with on a regular basis.

Multicultural Education

James Banks, one of the most influential scholars of multicultural education, argued that the goal of multicultural education should allow for equal opportunity to all students, regardless of their social, economic, or ethnic backgrounds (Banks & Banks, 2004). Multicultural education also revolves around the understanding that some students have a better chance of learning and succeeding in our current educational system than others. This disparity in educational opportunity is a product of cultural and social differences that must be addressed in a way that provides all students with an equitable education (Banks, 2004; Gay, 2010; Sleeter, 2001). Banks (2004) conceptualized multicultural education into five main dimensions. First, content integration involves

teachers integrating student culture into the material through examples and relevant content. Second, the knowledge construction process addresses the extent to which teachers help students construct knowledge relating to cultural, social, and political frames of reference in a certain subject. Third, prejudice reduction aims to provide students an understanding of their own racial views and strategies to modify these ideas. Fourth, equity pedagogy facilitates achievement of students from different backgrounds and can be achieved through changes in teacher behavior and classroom environment. Finally, empowering school and social culture lies in restructuring the whole school in a manner that provides equity for all students, regardless the presence of racial, ethnic, cultural, or gender differences. These five dimensions work together to form a welcoming and equitable educational environment that helps counteract the adverse effects of institutional racism (Banks, 2004).

Multicultural education serves as a vital theoretical basis in culturally relevant education. One could argue that the ultimate goal is to educate all students despite their cultural, ethnic, and racial backgrounds. The dimensions outlined by Banks (2004) contribute to both Gay's (2010) and Ladson-Billings' (1995) structures of curriculum and instruction that are designed to empower and engage students who may not function well in a classroom that lacks cultural relevance.

Critical Race Theory

Critical Race Theory (CRT) is a theoretical framework that generally rests upon three tenets (Banks, 2012; Delgado & Stefanic, 2012):

1. Racism is an ordinary and pervasive force in all of American society

2. Institutions are built upon a white-over-color ascendancy, even when faced with equality-based reforms
3. Race is a social construct, not an objective or biological classification of humans. (pp. 6-8)

The first tenet refers to the "business-as-usual" view of racism as a force that people of color must live with every day. For example, the majority of the prison population is black and brown, while doctors and professors are mostly White. In addition, the majority of urban schools, which lack proper resources and are underfunded, enroll mostly minority students of lower socioeconomic status, resulting in inequity in educational quality that largely draws a line along race. Institutional racism stems from inequality purported by institutions that make up society, such as private companies and government.

The second tenet critiques equality-based reforms, such as affirmative action and open hiring practices, for not being powerful enough to overturn the stain of slavery and oppression of minorities. Delgado and Stefanic (2001) argued that such reforms do little to alleviate the underlying problems of racism while instilling a sense of resentment towards minorities in Whites that feel they are being excluded from opportunity. In other words, policymakers ensure that any equality-based reforms do not disadvantage Whites in favor of people of color, which Bell (1980) called interest convergence. This further disincentives changes in policy and attitude that could actually help mitigate the adverse effects of institutional racism in society (Zion & Blanchett, 2011).

Finally, the third tenet argues that race is a strictly social construct, created to group people based on physical characteristics, which leads to stereotyping and negative

attitudes that fit the needs of the White society in power. Aside from small genetic differences that lead to varying physical attributes but have no effect on intelligence or behavior, all humans are more similar than different. Yet the construct of race provides a grouping mechanism that is based on physical differences but is painted by false behavioral and intellectual stereotypes (Delgado & Stefanic, 2001).

Critical race theorists also argue that society constructs a false idea of fairness (Zamudio, Russell, Rios, & Bridgeman, 2011). In other words, society holds that power and privilege are built upon one's merit rather than circumstance. For educators, this manifests itself in a false liberal education based on meritocracy. Students are constantly told that they only need to work hard to succeed in school and in life. Also known as the invisible veil, meritocracy assumes universality in both experience and opportunity, regardless of poverty, ethnicity, culture, or gender (Sue & Sue, 2012). Critical race theorists assert that merit and effort serve as excuses for circumstances, such as insufficient funding of schools, deficient teaching, and lack of a culturally responsive school culture, that determine the educational experiences that affect achievement for minority children. Past and current policies touting equity and equality come under fire from critical race theorists. Though the last 75 years have seen various civil rights reforms, including school desegregation and extended voting rights, critical race theorists argue that these changes have never addressed the fundamental material inequality that stems from historical oppression of minorities. In addition, current educational policies rest on ideals of standards and accountability but treat all students as equals, ignoring ethnic, cultural, and racial discrimination and segregation.

Critical race theorists also employ the powerful tool of counter-storytelling, which shares the perspectives of people of color that constantly face oppressive and racist social systems (Banks, 2012). Instead of pivoting towards a culturally dominant view, counter-storytelling employs experiences of non-dominant groups to make sense of how racism pervades all aspects of society, including education. It is used by critical race researchers as a tool to share qualitative data in a way that can be understood by the dominant culture and helps move away from a deficit attitude towards people of color or living in poverty, which still pervades curriculum and instruction Seriki, Brown, & Fasching-Varner, 2015). There are also many branches of critical race theory that focus on various groups that face oppression, including Latinx CRT, Feminist CRT, Tribal CRT, and Asian CRT (Banks, 2012). Scholars of these branches focus on how forms of oppression by the dominant White culture specifically hinder social and economic growth in their populations. For examples, Latinx CRT scholars analyze issues of immigration, language, culture, and gender as they relate to Latin American and Hispanic populations in the United States (Solorzano & Bernal, 2001). Asian CRT scholars often focus on the myth of the "model minority," which is often used as a wedge between different ethnic groups as a form of racial control (Wu, 2013).

Teacher Beliefs

A major theoretical construct in cultural competency in education is teacher beliefs. Bandura's (1997) concept of reciprocal determinism, a view that personal factors, environmental influences, and behavior interact and influence each other, supports the relationship between teacher beliefs and teacher behaviors. Specifically, teacher self-efficacy, which includes beliefs of personal competence, can affect teacher behavior.

When applied to teacher self-efficacy in dealing with cultures different than their own or cultures with which they have little experience, this relationship may explain possible achievement gaps in diverse classroom settings (Pajares, 1996). Richardson (2003) argued for three sources of teacher beliefs: personal experiences, schooling experiences, and experiences with knowledge.

Rosenthal and Jacobson (1968) showed that a teacher's perception of a student's talent and achievement affect the student's performance. In their study, all student participants were given an IQ test, the results of which were not shared with teachers. Instead, students were randomly labeled as either blooming students, those expected to have high academic growth throughout the year, or struggling students, those expected to academically grow at slower rates. By the end of the year, "blooming" students performed significantly better than those labeled as struggling. This suggests that teacher perceptions added to the differential treatment based strictly on conception of ability. If teacher beliefs based on random labeling can lead to achievement gaps, teacher beliefs based on cultural stereotypes of various cultural groups can contribute to the increase in achievement gaps (Fang, 1996).

Measurement

Netemeyer, Bearden, and Sharma (2003) stated that social science researchers, including educational researchers, attempt to measure constructs that are not directly observable or quantifiable but are embedded in theory, known as latent constructs. When attempting to measure latent constructs, a scale must be constructed and regularly validated to ensure that the targeted constructs are actually being measured. The resulting scores are therefore theoretically driven by the constructs. The following sections outline

the importance of reliability and validity in measurement and describe current measures of cultural competency in Education.

Reliability. Reliability refers to an instrument's consistency of results and the absence of measurement error, which is the difference between an individual's true score on an instrument and the actual score obtained over different conditions (Gall, Gall, & Borg, 2007). An instrument is less useful if it cannot obtain consistent results, so a report of reliability is vital. Various types of reliability and measures exist but two broad types of reliability used in instrument creation are test-retest reliability and internal consistency.

Test-retest reliability refers to the examination of the scores from two different administrations of an instrument on the same group (Gall et al., 2007). A coefficient is estimated by a correlation of the results of the two administrations. A higher coefficient value means higher level of reliability in the instrument. Conditions for both administrations must be the same and the construct cannot change over that time. An additional constraint is the time between administrations. There must be enough time that reliability can be accurately measured while too much time between administrations will decrease accuracy. Test-retest reliability is unique in that it provides a confidence in reliability, though it is not as prevalent a measure as internal consistency, most likely due to the investment of time and energy that it requires (Netemeyer et al., 2003).

Internal consistency refers to the comparison of individual items on an instrument through calculating correlation (Trochim, 2006). High reliability comes from high internal consistency between items and only requires a single administration. Cronbach's alpha is the most commonly calculated coefficient of internal consistency for non-

dichotomous items, including Likert-type items. A Cronbach's alpha above .70 indicates an acceptable level for reliability (Field, 2013).

Validity. Construct validity refers to the extent to which theory or the construct is supported in the interpretation of an instrument's scores (Gall et al., 2007). By this definition, instruments themselves cannot be valid or invalid. Instead, validity lies in the interpretation and use of instruments. A simplified definition lies in the question "Does this instrument really measure what it says it measures?" For example, does an assessment of science content that includes multiple choice, short answer, and essay questions only measure science content? What about math, reading and writing skills? Instruments that measure cultural competency face the same issues of validity. Types of construct validity relevant to instrument creation include face validity, content validity, concurrent validity, convergent validity, and discriminant validity.

Face validity refers to a casual, subjective inspection of the instrument that judges whether or not it is an appropriate measure of the theoretical construct. It also includes readability and clarity of the items and instrument. This is generally the weakest measure of validity and appropriate for low stakes assessment (Trochim, 2016). Content validity, a stronger measure of alignment to the theoretical construct, can be established through experts in the content domain of the theoretical construct. A common step in instrument creation is a panel review of the instrument in which experts judge each item for language, clarity, and faith to the content (Netemeyer et al., 2003). Concurrent validity refers to the ability to distinguish scores from groups that are shown to be statistically distinct. The two groups should have statistically different scores in the assessment, suggesting concurrent validity. Convergent validity refers to the ability of an instrument

to positively correlate with an instrument of the same construct, while discriminant validity refers to the degree to which an instrument diverges from another instrument measuring an unrelated construct (Gall et al., 2007). Convergent and discriminant validity are the more commonly used forms of statistical validity testing, as they only require an additional instrument administration along with the instrument in question. Concurrent validity requires two distinct populations that perform differently based on the construct, which is difficult in the real world.

Existing Measures of Cultural Competency

One of the most widely used measures of cultural competency or awareness is the Cultural Diversity and Awareness Inventory (CDAI) (Henry, 1986). This instrument was originally designed to measure an educator's attitudes, beliefs, and behaviors towards students of differing cultural and ethnic backgrounds. The instrument consists of 28 items on a 5 point scale from which respondents must select responses ranging from Strongly Agree to Strongly Disagree in relation to the statement. The theoretical basis of the CDAI derives from Aragon's (1973) definition of culture, which includes values and beliefs, communication styles, social relationships, basic diet and food preparation, and dress customs as major factors of culture. The original published instrument contains no mention of reliability or validity statistics. Subsequent studies using the CDAI also lack any reporting of reliability or validity (Brown, 2004; Larke, 1990; Milner, 2003; Russell & Russell, 2014). Furthermore, some researchers that use the CDAI to measure cultural awareness revise items, which could in turn change the reliability and validity of the original instrument (Larke, 1990; Milner, 2003).

The Cultural Awareness and Beliefs Inventory (CABI) (Webb-Johnson & Carter, 2005) was designed to measure the cultural awareness and beliefs of urban teachers who primarily teach African-American students. The 46-item instrument was created after a literature search resulted in eight factors including: teacher beliefs, school climate, culturally responsive classroom management, home and community support, cultural awareness, curriculum and instruction, cultural sensitivity, and teacher efficacy. The items were rated on a 4-point Likert scale, from Strongly Disagree to Strongly Agree.

Natesan et al. (2011) performed a parallel mixed methods study to measure the reliability and validity of the CABI. Internal consistency was established by Cronbach's alpha while content validity was established through consultancy of a jury of urban education experts. An exploratory factor analysis with principal components and an orthogonal rotation was performed to address structural validity. A narrative analysis of short answer items provided data to establish substantive validity through the lens of Critical Race Theory.

A principal component analysis with an orthogonal rotation revealed 12 factors with eigenvalues greater than 1 that explained 53.5% of the variance. Four factors failed to have the necessary number of items and 10 items failed to have sufficient loading values and were deleted, leaving 8 factors over 36 items. Content validity was established through consultation with a jury consisting of four urban teacher education experts. The jury studied the literature surrounding issues of urban teaching and compared themes to the factors that measured cultural awareness and beliefs of teachers. All members of the jury agreed that the items adequately represented the underlying theoretical constructs.

Reliability of the whole instrument was measured with Cronbach's alpha, which was 0.83. Internal consistency of the subscales ranged from 0.46 to 0.88.

Though the CDAI is used more often, in comparison the CABI has evidence of some reliability and validity through these studies. The theoretical constructs cover a wide range of factors that are essential in teaching a diverse population. The instrument, however, was mainly designed for use with African American students and may not be generalizable to more diverse populations. Further research is needed with high numbers of single minority populations or overall more diverse student populations.

The Teacher Multicultural Attitude Survey (TMAS) (Ponterotto, Baluch, Greig, & Rivera, 1998) attempted to measure multicultural awareness and sensitivity. The self-report instrument consists of 29 items on a 5-point Likert scale with responses ranging from Strongly Disagree to Strongly Agree. The initial items were developed by a four member team of a professor and three graduate students. A literature review resulted in items that reflected general multicultural awareness, appreciation, and tolerance. The committee originally created 50 items but reduced that number to 31 after review with both positive and negative direction control. To establish content validity, 10 graduate students rated the items on clarity and appropriateness, rewriting 10 questions and dropping 2.

A pilot study of 220 teacher education students resulted in a Cronbach's alpha coefficient of 0.82, suggesting adequate reliability of the instrument. A principal components analysis with an orthogonal rotation resulted in a one factor model. Ten items failed to load at high enough coefficients and were dropped, resulting in a final instrument of 20 items. In a second phase, researchers compared an administration of the

TMAS to 227 graduate students to the results of three other instruments, the Multigroup Ethnic Identity Measure (MEIM), the Quick Discrimination Index (QDI), and the Social Desirability Scale (SDS), for concurrent validity testing. The items based on race and gender from the QDI showed positive correlations with the TMAS while the entirety of the MEIM showed positive correlation, providing evidence of concurrent validity. There was not a statistically significant correlation with the SDS, indicating little to no contamination from social desirability.

Both validity and reliability were addressed in studies using the TMAS. Ponterotto (1998) showed content and concurrent validity through an expert panel and a correlational analysis with similar measures, along with reliability through Cronbach's alpha. The factors addressed by the TMAS focused more tightly on the construct of multicultural education, which leaves out tangential constructs such as critical race theory and teacher stereotypes that still play a role in teacher cultural awareness and competency.

The Teaching in Urban Schools Scale (TUSS) (Swartz & Bakari, 2005) aimed to measure knowledge of urban teaching and diversity. An initial literature review resulted in 150 knowledge based, yes or no questions based on 11 salient themes. An expert panel of teachers and teacher educators with vast experience with teaching in urban settings reviewed the items to establish content validity. The 150 items were narrowed down to 76, which were then piloted with 275 education graduate students. Though reliability coefficients and scale to subscale correlations were obtained in the study, the researchers did not report these statistics for the pilot study. The items and results of the pilot study were returned to the expert panel, who changed the instrument to 91 items over 8

subscales: teachers as professionals, families and community, emancipatory pedagogy, cultural knowledge, systemic analysis, classroom environment, student experience, and importance of cultural knowledge.

The main study consisted of 248 graduate students, 84% of whom were White and 88% of whom were female. Cronbach's alpha for the entire scale was 0.91, suggesting high reliability. The subscale alphas ranged from 0.46 to 0.81. Discriminant validity was supported by the difference in scores between participants who indicated interest in teaching in urban settings versus those who did not indicate any interest in urban teaching.

A major concern with the TUSS as an instrument is the design of the items, which are knowledge-based yes or no questions. Though they are based on 8 salient themes that are necessary in understanding teaching diverse student groups, the dichotomous data, in the form of yes or no questions, result in a statistical analysis that results in less variability in comparison to scales with continuous variables. Content validity was established through a panel review, discriminant validity was established through a comparison of scores between teachers with and without interest in teaching in urban areas, and reliability was established through Cronbach's alpha. These procedures suggest reliability and validity but the scope and generalizability of the instrument are limited.

Pohan and Aguilar (2001) created a two part survey to measure both personal and professional beliefs regarding issues of diversity called The Personal Beliefs About Diversity Scale and The Professional Beliefs About Diversity Scale. The Personal Beliefs scale consists of 15 items across 7 factors while the Professional Beliefs scale consists of

25 items across the same 7 factors. The authors reviewed the theoretical constructs of sociocultural diversity topics and current instruments that measured those constructs to develop the items. Initial content validity was established through a review of items by three professors with a minimum of four years of teaching experience and five graduate students who had completed courses in multicultural education and issues. The panel evaluated the items for appropriateness and clarity.

A pilot test with 280 undergraduate teacher candidates resulted in a Cronbach's alpha of 0.74 for the Personal Beliefs scale and 0.86 for the Professional Beliefs scale, suggesting adequate reliability. A further study of 1,295 preservice and practicing teachers from four states resulted in a Cronbach's alpha of 0.87 for the Personal Beliefs scale and 0.81 for the Professional Beliefs scale, confirming reliability. A correlational analysis of both scales with age, gender, multicultural work experience, and cross-cultural experiences such as traveling showed a statistically significant positive relationship between cross-cultural experiences and scores on both scales, suggesting that there may be a relationship between beliefs and experience. This analysis also provided more construct validity.

Many other instruments that purport to measure cultural competency in other populations and professional fields exist. Extensive research has been conducted in cultural competence in the medical field, which requires successful cross-cultural communication to ensure positive outcomes for patients. Kumas, Beagan, Loppie, MacLeod, and Frank (2007), in an analysis of commonly used measures of cultural competency in the health field, discussed ten commonly used instruments and pointed out

similar issues as found in measures specific to education, such as low psychometric quality or unrepeatable factor structures.

Conclusion

Though many measures of cultural awareness and competency in teachers are commonly used, gaps still exist. Current instruments have varying theoretical backgrounds, some covering only a few dimensions across which modern teachers must be assessed in order to better measure their cultural competency. Measures with adequate theoretical coverage lack generalizability to diverse populations. There are increasingly more schools that have diverse student populations, meaning students come from many different backgrounds. Teachers must be able to address this diversity in a way that empowers students while respecting the cultural capital they bring with them to the classroom. Teachers must also understand how racism and oppression pervades various institutions, including educational institutions, and can negatively affect minority students.

Teachers gain knowledge as they become more aware of a culture, which helps them build and hone skills. But culture is fluid and varies greatly in modern classrooms. Therefore, the building of cultural competency takes constant work and is an ongoing process. The first stage of cultural competency, cultural awareness, requires training and experiences that reflects the populations a teacher must work with. The reliable and valid measurement of cultural awareness is necessary to assist teachers in assessing their own awareness, just as reliable and valid assessments of student skills and knowledge are required in the classroom. Though existing measures of cultural awareness are widely

used, a newer measure is needed that fills the theoretical gaps and better reflects the changing demographics of today's classroom and attitudes that pervade society.

CHAPTER III: METHODS

Introduction

This chapter provides the research methodology used in the design and psychometric evaluation of the Educators Scale of Student Diversity (ESSD). Though many models of instrument creation exist, most follow the same dual-phase method. First, the instrument is created from a strong conceptual base. Then the instrument undergoes rigorous psychometric analysis to support reliability and validity (Netemeyer et al., 2003). This chapter details both phases used in the creation of the Educators Scale of Student Diversity (ESSD).

Population

The instrument created for this study aims to measure cultural competency in K-12 public school educators. The validation phase of the study took place in a medium-sized public school district in the Pacific Northwest. The school district serves a fast-growing and diverse population, with many different immigrant populations in the area. The population of teachers that participated in the validation of the instrument was fairly homogeneous, as 92.5% were White, 5.0% were Asian, 3.4% were Hispanic, and 2.1% were Black. These demographics were close to the district data (see Table 1).

Table 1

Comparison of School District and Pilot Study Demographics on Race/Ethnicity

Race/Ethnicity	School District	Pilot Study
Hispanic/Latino	2.6%	3.4%
Asian	6.1%	5.0%
Black/African American	0.9%	2.1%
White	90.0%	92.5%

Half of the schools in the district served a suburban population while the other half served an urban-characteristic population. Milner (2010) defined urban characteristic as schools that are not in urban areas but have similar challenges, such as high enrollment, higher concentration of low income students, increasing English language learner population, and inadequate resources. 76% of participants were female while twenty two percent were male. Twenty nine percent of teachers held a Bachelor's degree, seventy percent held a Master's degree, and one half of a percent held a Doctoral degree. Twenty two percent of the teachers had 0-5 years of experience, thirteen percent had 6-10 years of experience, nineteen percent had 11-15 years of experience, and forty five percent had more than 15 years of experience in K-12 education. Forty one percent of teachers taught in an elementary school, twenty five percent in a middle school, and thirty three percent in high school.

Table 2

Demographic Data of Participants

Variable	Percentage
Gender	
Male	22%
Female	76%
Degree Attained	
Bachelors	29%
Masters	70%
Doctorate	.5%
Years of Experience	
0-5 years	22%
6-10 years	13%
11-15 years	19%
15 or more years	45%
School Level	
Elementary	41%
Middle	25%
High	33%

Sample Size

A convenience sample was used in this study. Random sampling methods are agreed to be a superior sampling method because random samples of a population can provide a more accurate representation of the target population of the study (Trochim, 2016). The results of a study that employs random sampling also have higher external validity, which means results can be generalized to the whole population. A convenience sample, however, was a more realistic sampling process in the purview of this study and

still provided an adequate sample size. Convenience sampling is a nonprobability based sampling procedure because it does not ensure random, probability based selection of participants. Therefore, the sample may not be an accurate representation of the target population and results cannot be generalized to the target population (Field, 2013).

The ESSD was sent to the 957 teachers in the school district via email. To increase the likelihood of response from teachers, the district superintendent sent the survey to staff with an attached cover letter (Appendix A) from the researcher. In addition, a follow up email was sent by the superintendent one week after the initial contact. The researcher sent a final follow up email two weeks after the initial email.

Instrumentation

This study resulted in the development of an instrument that validly and reliably measures attitudes towards diversity and racism based on four underlying constructs uncovered from a thorough literature review: Cultural Competency, Culturally Responsive Pedagogy, Multicultural Education, and Critical Race Theory. Items were written based on each of these constructs, which served as the potential four subscales to the instrument. The instrument was designed for K-12 public school teachers, a fairly homogeneous population that must educate an increasingly diverse population of students. The initial draft of the instrument consisted of 50 items on a 5 point Likert-style scale from which respondents selected a response from *Strongly Agree* to *Strongly Disagree* in relation to the statement (Appendix B). The initial proposed Cultural Competency subscale consisted of 17 items, the Multicultural Education subscale consisted of 9 items, the Culturally Responsive Pedagogy subscale consisted of 10 items, and the Critical Race Theory subscale consisted of 14 items. Various steps of validation

of the instrument resulted in a more refined instrument with fewer items and will be discussed below.

Research Procedure

The researcher used the Netemeyer et al. (2003) and the Governmental Accountability Office (1998) guidelines for scale development. The steps are outlined below, including appropriate statistical analyses for reliability and validity (Pett et al., 2003). A multivariate analysis of variance (MANOVA) was used to analyze any differences in scale scores based on the demographic variables of race and ethnicity, gender, years of experience, and school level.

Scale construction. The creation of a valid and reliable instrument must begin with a clear definition of the constructs being measured (Netemeyer et al., 2003). Additionally, the constructs being measured must be grounded in a theoretical framework for the instrument to exhibit validity. In the development of the Educators Scale of Student Diversity, the construct of educational cultural competency was derived from a literature review, resulting in four constructs: Cultural Competency, Culturally Responsive Teaching, Multicultural Education, and Critical Race Theory. Together, these constructs contribute to the overall framework of educational cultural competency.

Items were created with the theoretical constructs as guides. Items were also partly derived from existing measures of cultural competency that had some factors in common with the instrument being created. The items were written in Likert-style response format. A multichotomous scale format is advantageous over a dichotomous format because it can create more variance. Netemeyer et al. (2003) suggested a five or seven-point scale. For the current study the scale was a five-point scale with choices

ranging from *Strongly Disagree* to *Strongly Agree*. The middle choice was *Neither Agree or Disagree*.

Content validation. To support content validity, the instrument was examined by a panel of experts in the areas of multicultural education, social justice education, and cultural competency. The experts were educators from varying backgrounds, including nonprofit consultants, state level administrators, and university faculty. Each expert had many years of experience in their respective field and are generally agreed to be knowledgeable in the areas of multicultural education, social justice education, and cultural competency. The panel was asked to review the items for their fidelity to the constructs of educator cultural competency from the literature review and wording, language, and readability (Appendix C). To provide a way to compare the experts' analyses, the reviewers used a five-point Likert scale to rate each item's relation to the constructs. The experts also provided written feedback on some of the items. Of the initial 50 items, ten items were removed, nine items were reworded for clarity, and eight items were added. Three of the items that were added were simplified and condensed versions of items that were removed. The other five items that were added had the support of multiple experts on the panel and further refined the instrument.

The instrument was then shown to a group of six full-time high school educators and judged for clarity of language. The researcher discussed each item in depth to ensure that the language was interpreted in a consistent manner. Current educators were chosen for this step because they represented the intended audience that would eventually serve as the sample for the pilot test. Two additional items were removed and five more items

were reworded for further clarity. The resulting (Appendix D) instrument that was used in the pilot study consisted of 46 items.

Pilot study. The next stage in the development of the ESSD was a pilot study. Once the expert panel approved the instrument and the appropriate changes were made, the instrument was sent out to the 957 teachers of the district via email. Tabachnick and Fidell (2012) suggested that a sample size of 300 is good for instrument development and factor analysis, while 500 is very good. The email had a link to two surveys. One was the Educator's Scale on Student Diversity and the other was the Cultural Diversity and Awareness Inventory. Both surveys were administered using Google Forms, which provides the results in spreadsheet format while protecting the identities of the respondents. To increase the response rate, the initial email was sent by the district superintendent, which carried more importance and possibly resulted in more teachers responding to the surveys. The email included a cover letter from the researcher that explained the study, provided an estimate of how long both surveys would take, and explained what the surveys should be measuring. The period of data collection spanned two weeks. A follow up email was sent a week after the initial email as a reminder from the superintendent. The researcher sent a final follow up reminder email two weeks after the initial message. A total of 372 teachers responded to the survey, resulting in a response rate of 38.8%. Previous analyses of response rates from email surveys identify a mean response rate between 30% and 34%, suggesting that the rate of 38.8% reflects an adequate rate of response (Cook, Heath, & Thompson, 2000).

Exploratory factor analysis. Further construct validity was established through an Exploratory Factor Analysis (EFA). An EFA was chosen as the statistical analysis tool

because it is used to explore the underlying dimensions of a construct, which is essential in instrument development (Pett et al., 2003). Though the literature review resulted in four factors that encompass the construct of educational cultural competency, the relationship between the items, the factors, and the overall construct was not statistically clear. An EFA was a more appropriate choice than a Confirmatory Factor Analysis (CFA) because a CFA is used to match data with known constructs, usually in hypothesis or theory testing. Pett, Lackey, and Sullivan (2003) and Netemeyer et al. (2003) suggested using an EFA when designing an instrument.

The data were first examined for completeness. To qualify for the statistical analysis, all items in both surveys had to be completed, along with all demographic identifying items. Any responses that were missing items were excluded, as their inclusion would increase overall error. Certain conditions of normality must be met to successfully complete a factor analysis. The data were first examined for normality using descriptive statistics and histograms. Then the data were analyzed for factorability. There must be some level of correlation between items to properly group them into factors. An initial check included analyzing the correlation matrix for correlations between .30 and .80. Any correlations below .30 are too low to adequately factor while correlations above .80 are too high and can indicate multicollinearity, indicating that they may be accounting for the same variance. Items with correlations too high or too low were excluded from the factor analysis. In addition, Bartlett's Test of Sphericity was calculated, which tests the null hypothesis that the correlation matrix has the same values as an identity matrix, which shows no relationship between the items. If test produces a statistically significant result, then there is some relationship between items, indicating they are factorable (Pett

et al., 2003). The Kaiser-Meyer-Olkin (KMO) coefficient was also calculated, which measures the sampling adequacy by testing the strength of the relationship between items by comparing the calculated correlation coefficient to the partial correlation coefficient. A value above 0.70 is acceptable for factorability (Pett et al., 2003).

Once the factors were extracted, the model was rotated to achieve a more simple structure (Pett et al., 2003). There are two main types of rotation: oblique and orthogonal. Oblique rotation is used when theoretically there is a correlation between the factors while orthogonal rotation is used when the factors are independent of each other. An oblique rotation was used because of the theoretical correlation between the factors that were uncovered through the literature review. Though the factors were individual theoretical constructs, there was some overlap in theory and context, which would affect the overall variance, suggesting an oblique rotation.

The next step in the process of factor analysis was to decide which factors to retain. Two commonly used criteria of retention were used as guides. The first, the Kaiser criterion, suggests retaining factors that have eigenvalues of at least 1 (Netemeyer et al., 2003). Eigenvalues represent the fraction of the variance accounted for by a factor. An eigenvalue below 1 usually does not account for enough of the overall variance to be assigned as a factor. The second commonly used criterion is analyzing the scree plot, which is a graph of eigenvalues and possible factors. A guide to find the number of factor to retain starts with looking for the number of points above the first sharp bend in the plot. The number of points above the bend would be the numbers of factors to retain (Field, 2013).

Each item was then analyzed for its overall contribution to the instrument, which refined the factors further. Most items will load on some or all factors to varying degrees. In an ideal, refined instrument, items will strongly load on only one factor (Field, 2013). The factor structure matrix was simplified to suppress factor loadings less than .30, which does not delete any low-loading factors but hides them, simplifying the matrix. Any items with weak loadings, under .30, on any factor were dropped. Some items loaded strongly on multiple factors. These items were eliminated to simplify the structure or assigned to the factor with which they had a stronger theoretical relationship. This process resulted in a simple structure solution, found in Appendix E (Pett et al., 2003).

Reliability. In order to assess the reliability of the instrument, Cronbach's alpha was calculated (Vogt & Johnson, 2011). Cronbach's alpha calculates the mean of all possible split-half correlations to compute the total inter-item correlations, which evaluates how the items are interrelated. Trochim (2016) suggested a minimum alpha value of .70 for adequate reliability. Any value lower than this cutoff is not acceptable evidence for reliability while a value higher is stronger evidence of reliability. Cronbach's alpha was also calculated for each individual factor.

Correlational analysis. Further construct validity was established through an analysis for convergent validity. Along with the Educator's Scale on Student Diversity, the Cultural and Diversity Awareness Inventory (Henry, 1986) was also administered to participants. The instrument consists of 28 items on a five-point Likert-style scale in which respondents must pick from Strongly Agree to Strongly Disagree in relation to the statement. Though there is no extensive research on the validity and reliability of the instrument, it is widely used to measure cultural competency and can still provide

evidence of convergent validity. The results of the two surveys were compared with a correlational analysis. A positive correlation between the two instruments would provide evidence of convergent validity and the Pearson-*r* statistic would be the best analysis tool (Field, 2013).

Multivariate analysis of variance. A multivariate analysis of variance (MANOVA) was conducted to determine statistical significance of any difference in respondents based on the demographic variables of race and ethnicity, gender, years of experience in a K-12 setting and grade level range of school. Teacher ethnicity could not be analyzed because of the uneven samples of each ethnicity (Field, 2013). Therefore, the data were recoded to reflect two groups: White and Person of Color. The factor scale scores were used as the dependent variables while the demographic variables were used as independent variables. A MANOVA is used when comparing groups on multiple dependent variables (Tabachnick & Fidell, 2012). In instances where the multivariate analysis resulted in statistically significant differences, follow up univariate analyses of variance (ANOVAs) were computed. Post-hoc tests were conducted as follow-up analyses to further explore statistically significant differences of any statistically significant ANOVAs.

Conclusion

This chapter discussed the research methodology used in the design and psychometric evaluation of the Educators Scale of Student Diversity (ESSD). A dual-phase method of instrument creation through literature review and validity and reliability testing was employed for this study. The first phase consisted of a literature review, which resulted in four theoretical constructs from which items were written. Then items

were reviewed by an expert panel and a focus group of current K-12 teachers for content and face validity. In the second phase of this study, the instrument was pilot tested in a medium-sized school district in the Pacific Northwest. An exploratory factor analysis was performed to assess the validity of the instrument. A reliability analysis was then performed on the refined instrument. A correlational analysis was performed with the CDAI, which was administered alongside the ESSD, to analyze convergent validity. A MANOVA was performed to compare factor scale scores across the demographic variables of race and ethnicity, years of experience, gender, and school level.

Chapter IV: RESULTS

Introduction

This chapter will describe the results of the study, including the analyses performed to answer the research questions. This study consisted of the development and validation of an instrument to measure attitudes towards diversity and cultural awareness in educators. The survey data were collected from a sample of 372 Kindergarten through High School teachers and instructional coaches in a medium sized school district in the Pacific Northwest. The data collection period took place at the end of the 2016-2017 school year. Data analysis was performed using Statistical Package for Social Sciences (SPSS) 24. Prior to the analysis, the survey results were examined for completeness. Of the 372 total respondents, eight respondents did not complete the surveys and were excluded from the analysis.

Factor Analysis

Field (2013) suggested that the correlations between items must be examined before a factor analysis can be performed. If the correlation between variables is too low or too high, the data set cannot be factored. Field (2013) suggested excluding items with correlations below .3 or higher than .8. Due to this criterion, the following 16 items were excluded from the factor analysis: 1, 6, 7, 8, 12, 14, 15, 17, 19, 20, 22, 26, 27, 33, 35, and 43.

Once items were examined for appropriate correlations, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity were calculated to determine the factorability of the results. The KMO measure was .91, which demonstrates adequacy. Bartlett's Test of Sphericity was statistically significant ($\chi 2$ =

2404.87, $df = 23$, $p < .001$), which indicates a relationship between items and confirms factorability of the data set (Pett et al., 2003). Both results suggested that the data were factorable and an exploratory factor analysis (EFA) could be performed.

Table 3

KMO and Bartlett's Test Results

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.91
Bartlett's Test of Sphericity	Approx. Chi-Square	2404.87
	df	23
	p	.000

An EFA based on principal axis factoring with a promax rotation was performed in order to achieve a simple factor structure. A promax rotation is an oblique rotation and was used because of the theoretical correlation between the constructs from which items were drawn. The initial factor analysis resulted in a five factor solution that explained 53.16% of the total variance (see Table 4). In addition to using Kaiser's rule of retaining factors with eigenvalues above one, the scree plot was also examined for a change in slope to determine the number of factors to be extracted (see Figure 1). Kaiser's rule indicated five factors should be retained while the scree plot indicated four factors should be retained.

Table 4

Total Variance Explained: Five-Factor Solution

	Initial Eigenvalues			Rotation Sums of Squared Loadings
Factor	Total	% of Variance	Cumulative %	Total
1	7.594	30.376	30.376	4.681
2	2.039	8.155	38.530	5.443
3	1.356	5.423	43.954	4.285
4	1.268	5.074	49.028	3.123
5	1.033	4.133	53.160	5.026

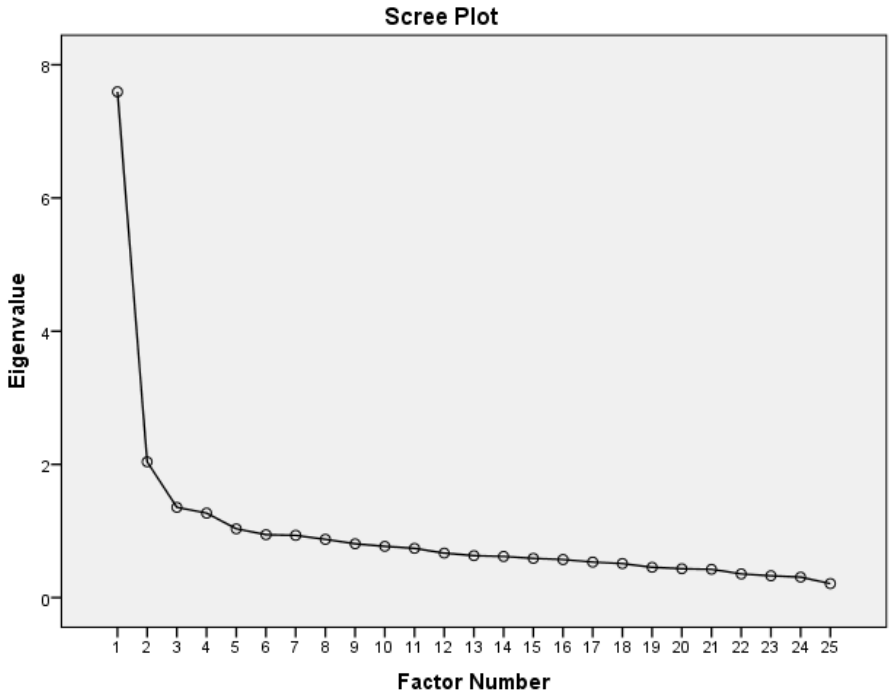

Figure 1. Scree plot of initial extraction with promax rotation.

To further refine the instrument, a promax rotation was performed. The resulting pattern matrix, which was simplified to suppress factor loadings less than .30, showed that items 36 and 45 did not adequately load on any factors and these were excluded from further analyses. In addition, items 3 and 38 were the only items that loaded on Factor 4

(see Table 5). Even though the items had high factor loadings, Tabachnick and Fidell (2012) suggested that factors should contain at least three or four items. Therefore, items 3 and 38 were also excluded. Three items loaded on multiple factors, which is not ideal but acceptable if they have theoretical support to remain in the instrument (Pett et al., 2003).

Table 5

Pattern Matrix: Five-Factor Solution

	Factor				
Item Number	1	2	3	4	5
34	.793				
40	.608				
42	.583				
13	.509				
39	.440				.409
5	.320				
18		.854			
2		.761			
31		.688			
21		.492			
44		.358			
36					
32			.581		
30			.576		
28			.405		
29			.395		
25			.373		
38				.899	
3				.807	
46					.672
41					.457
37		.372			.419
9	.323				.376
4					.312
45					

Once items 3, 36, 38, and 45 were dropped, a four-factor solution was achieved, explaining 49.89% of the variance (see Table 6). The first factor explained 30.45% of the variance while the second, third, and fourth factors explained 8.27%, 6.15% and 5.01% of the variance, respectively. Each factor will be discussed in depth later in this section. Though the four-factor solution explained less variance than the five-factor solution, one factor was dropped from the five-factor solution because it did not have the minimum number of items suggested by literature, therefore the four-factor solution was retained. Items 10, 23, 16, 24, and 11 did not load on any factors in the four-factor solution; therefore, they were excluded.

Table 6

Total Variance Explained: Four-Factor Solution

	Initial Eigenvalues			Rotation Sums of Squared Loadings
Factor	Total	% of Variance	Cumulative %	Total
1	6.699	30.452	30.452	4.679
2	1.820	8.274	38.726	4.189
3	1.354	6.153	44.879	3.439
4	1.103	5.012	49.891	4.410

Item 37, "*Society gives White people more privileges than people of color,"* loaded on both factors one and four but was assigned to factor one due to a higher loading and a stronger theoretical relationship with the items of factor one, which discussed issues of Critical Race Theory and culturally responsive instruction. Item 39, "*All students benefit from a diverse staff and faculty,"* loaded on factor two and four but was assigned to factor two due to a higher loading and stronger theoretical relationship

with items of factor two, which discussed culturally responsive instruction. Factor four focused on diversity of student population, not staff and faculty. Item 28, "*Schools in higher income neighborhoods should receive less funding and resources than those in lower income neighborhoods,"* loaded on both factors three and four but was assigned to three due to a higher loading and stronger theoretical relationship to the items of factor three, which discussed sociopolitical and equity issues. Item 9, *"Diversity in a school benefits all students more than homogeneity of ethnicity,"* loaded on both factors two and four but was assigned to factor four due to a higher loading and stronger theoretical relationship with the items of factor four, which discussed the values of diversity of the student body. The final factor analysis resulted in a 22-item instrument consisting of four factors that account for 49.89% of the variance (see Table 7).

Table 7

Pattern Matrix: Four-Factor Solution

	Factor			
Item Number	1	2	3	4
18	.823			
2	.795			
31	.670			
21	.465			
37	.406			.398
44	.399			
36	.351			
34		.788		
40		.600		
42		.571		
13		.508		
39		.429		.385
5		.313		
30			.558	
32			.529	
29			.396	

28		.386	.305
25		.363	
46			.660
41			.456
9	.316		.378
4			.349

Factor 1: Race and Bias. The first factor consisted of items 18, 2, 31, 21, 37, 44, and 36 (see Table 8). This subscale explained 30.42% of the total variance of the instrument. These statements came from the constructs of culturally responsive instruction and critical race theory. Item 21 was identified as an item under culturally responsive instruction while items 2, 18, 31, 37, 44, and 36 were related to critical race theory in educational settings. Therefore, this subscale was titled Race and Bias. These items aim to measure teacher attitudes towards issues of race, ethnicity, and bias. Higher scores in this subscale indicate more positive attitudes and understanding towards these issues as they are discussed in the literature.

Table 8

Factor 1 Items and Factor Loadings

Item	Statement	Factor Loading
18	The ethnicity of the teacher does not matter when educating students.	.823
2	Students of color are disciplined at an equal rate and manner as White students	.795
31	All teachers, including myself, have implicit bias that negatively affects their interactions with some students.	.670
21	Native American students do not require differentiated instruction based on their cultural background.	.465
37	Society gives White people more privileges than people of color.	.406
44	Racism pervades all aspects of society, including my educational workplace.	.399
36	"Non-standard" English is not appropriate in academic settings.	.351

Factor 2: Culturally Responsive Instruction. The second factor consisted of items 34, 40, 42, 13, 29, and 5 and accounted for 8.27% of the total variance (see Table 9). These statements came from the construct of culturally responsive instruction. Therefore, this subscale was titled Culturally Responsive Instruction. A higher score from this factor indicates that the respondent believed that curriculum and instruction should include the cultural capital of students, which has shown to increase engagement and achievement, as mentioned in Chapter 2.

Table 9

Factor 2 Items and Factor Loadings

Item	Statement	Factor Loading
34	Teachers need to make an effort to learn something about all the various cultures represented in their classroom	.788
40	Teachers should take students' cultural backgrounds into account when planning instruction.	.600
42	Teachers should help students from different cultures maintain positive attitudes about themselves.	.571
13	Teachers should be responsible for helping students develop positive attitudes towards different ethnic and cultural groups.	.508
39	All students benefits from a diverse staff and faculty.	.429
5	Students should see cultures similar to their own in the curriculum.	.313

Factor 3: Equity. The third factor consisted of items 30, 32, 29, 28, and 25 and explained of 6.15% of the total variance (see Table 10). These items came from the constructs of culturally responsive instruction, multicultural education, and critical race theory. A common thread that tied together these items was the inclusion of sociopolitical context in the classroom and attitudes towards issues of opportunity and equity. Item 25 was written to fall under the construct of cultural awareness but can also be classified as an issue of equity. Therefore, this subscale was titled Equity. It is interesting to note that issues of sociopolitical context in the classroom and out of the classroom were grouped into the same factor, as the literature points to sociopolitical context in curriculum and instruction as a part of culturally responsive instruction while issues of opportunity and equity were found in multicultural education and critical race theory. Higher scores in

this subscale indicate positive attitudes towards including sociopolitical issues in the classroom and equity for students.

Table 10

Factor 3 Items and Factor Loadings

Item	Statement	Factor Loadings
30	Lower income families should be given financial assistance to live in wealthier neighborhoods in order for their children to attend better schools.	.558
32	Schools should offer students of color opportunities that are not open for White students.	.529
29	Teachers should include sociopolitical context in their curriculum and instruction.	.396
28	Schools in higher income neighborhoods should receive less funding and resources than those in lower income neighborhoods.	.386
25	The primary religions of a district's families should have their holidays represented in the school calendar (e.g. 10 day break for Christmas, 3 day break for Eid, 2 day break for Diwali, etc.)	.363

Factor 4: Diversity in Education. The fourth factor consisted of items 46, 41, 9, and 4 and explained 5.01% of the variance (see Table 11). These statements came from the constructs of critical race theory and cultural awareness. Items 46 and 9 addressed the benefits of diversity in an educational setting while items 41 and 4 addressed the structure of the educational system. As these items discussed the design of the educational system and the impact of current trends in demographics on that system, this subscale was titled Diversity in Education. Higher scores in this subscale indicate positive attitudes towards diversity in schools and the understanding that the educational system favors students and families of the dominant, White, middle-class culture.

Table 11

Factor 4 Items and Factor Loadings

Item	Statement	Factor Loadings
46	White students benefit from attending a school of diverse staff and faculty more than from a school with a mostly White staff and faculty.	.660
41	The American educational system is designed to educate middle class students of European descent.	.456
9	Diversity in a school benefits all students more than homogeneity of ethnicity.	.378
4	The traditional classroom has been set up to support a middle-class lifestyle.	.349

Reliability Analysis

Cronbach's alpha was calculated to assess the reliability of the instrument (Vogt, 2011). The Cronbach's alpha for the entire 22-item instrument was .88, which is higher than the suggested minimum value of .70, suggesting high reliability (Trochim, 2016). Reliability statistics were also calculated for each individual subscale (see Table 12). Cronbach's alpha coefficients for each factor are displayed in Table 12. Factors 1 and 2 showed high reliability, with Cronbach alphas of .81 and .77, respectively, both of which are above the .70 recommendation for sufficient reliability (Trochim, 2016). Factors 3 and 4 had Cronbach alpha coefficients lower than the .70 cutoff – i.e., .62 and .68, respectively. Though the reliability of Factors three and four were lower than the .70 cutoff, it may be because the data were from a 5-point Likert scale, which is less variable than a continuous variable would be. In addition, self-report surveys that attempt to measure attitudes have been shown to have lower reliability statistics, as there may be

variation in attitudes based on the construct being measured (McCrae, Kurtz, Yamagata, & Terracciano, 2011).

Table 12

Reliability Statistics of the Instrument and Individual Factors

Factor	Cronbach's Alpha	N of Items
Factor 1:	.81	7
Factor 2:	.77	6
Factor 3:	.62	5
Factor 4:	.68	4
Total Instrument	.88	22

Correlational Analysis

A correlational analysis was performed between the ESSD and the CDAI (Henry, 1986) to establish convergent validity (Field, 2013). The CDAI is a widely used instrument to measure attitudes towards cultural diversity in teachers, though it is commonly altered, which may change the validity and reliability of the instrument. Scale scores were computed for both scales and a Pearson correlation was calculated between the two scales. There was a moderate positive relationship between the scale scores of the ESSD and the CDAI, $r = .51$, $p < .001$. This positive relationship suggests convergent validity of the ESSD, which means that the two instruments are measuring similar constructs. The coefficient of determination R^2 was .26, which is the proportion of shared variance and a measure of effect size of the correlation (Field, 2013).

Further correlational analysis was performed between the CDAI scale score and the individual factor scale scores of the ESSD (see Table 13). R^2 values were also calculated to show the shared variance between each subscale and the CDAI. When the

correlations were calculated between the CDAI and each subscale, the values were less than the overall *r* of .51 for Race and Bias, Equity, and Diversity in Education. Factor 2, Culturally Responsive Instruction, had a higher correlation than the ESSD as a whole.

Table 13

Correlations of Individual Factors of ESSD and CDAI Scale Score

Correlational Analysis	Factor 1	Factor 2	Factor 3	Factor 4
CDAI Score (Pearson's *r*)	.34	.64	.30	.41
R^2	.12	.41	.09	.17

Multivariate Analysis of Variance

To determine statistically significant differences based on demographic variables, a multivariate analysis of variance (MANOVA) was conducted. The four-factor scale scores were used as the dependent variables while the demographic variables of gender, years of experience, school level, and race/ethnicity were used as independent variables. The race/ethnicity variable was transformed into two groups, People of Color and White, because there were too few respondents in the non-White categories. Consolidating respondents into a single People of Color group still resulted in uneven group sizes, though the difference was less drastic. As discussed in prior chapters, there is wide variability in experiences between and within non-White ethnic groups and grouping respondents into a single People of Color group was done strictly for statistical expediency.

There was a statistically significant overall difference in scores based on gender, $\Lambda = .93$, $F(2,8) = 2.61$, $p = .008$, partial $\eta^2 = .034$. Further univariate analysis of variance

(ANOVA), however, did not show a statistically significant difference in individual factor scores based on gender. There were no statistically significant differences in scores for the independent variables of years of experience, school level, and race/ethnicity.

Conclusion

From the original 46 item instrument that was reviewed by an expert panel and a focus group of educators, a factor analysis and oblique rotation refined the instrument into a 22 item instrument with four subscales. The original items, derived from an extensive literature review and reviewed by an expert panel of educators with extensive experience in issues of cultural competency and race, were organized into the four theoretical constructs of cultural competency, culturally responsive instruction, multicultural education, and critical race theory. The factor analysis, however, did not organize the items in the four theoretical constructs from the literature review. Instead, the items were rearranged into four subscales and renamed based on the content of the items: Race and Bias, Culturally Responsive Instruction, Equity, and Diversity in Education. A reliability analysis resulted in a Cronbach's alpha of .88 for the entire scale, which suggests high reliability. Individual scale reliabilities were also calculated, ranging from .62 to .81. Furthermore, a MANOVA was performed to compare the factor scale scores between demographic groups of race, gender, years of experience, and school level. Of the demographic variables tested, only gender resulted in a statistically significant difference but further univariate analysis did not result in any significant differences in specific factor scores between gender. The implications of these results will be discussed in the next chapter.

CHAPTER V: DISCUSSION

Introduction

The purpose of this study was to create a valid and reliable instrument to measure cultural competency and attitudes towards diversity in public school teachers with a framework that included the four constructs of Cultural Awareness, Culturally Responsive Instruction, Multicultural Education, and Critical Race Theory. Once the survey items were written, they were reviewed by a panel of experts and a focus group of public high school teachers to establish content validity. An exploratory factor analysis was performed on the pilot study responses to establish further validity and explore the underlying constructs of the instrument. Convergent validity was also established through a correlational analysis with the CDAI. Finally, internal consistency was computed to establish reliability of the entire instrument and each subscale. This chapter discusses the significance of the results of the EFA, implications of the results, limitations of the study, and further research options.

Discussion

Of the original 46 items that were used in the pilot study, 24 items were excluded through the exploratory factor analysis: 6 of the 13 from Critical Race Theory, 2 of the 9 from Multicultural Education, 8 of the 10 from Cultural Awareness, and 8 of the 14 from Culturally Responsive Instruction were removed due to low or no loadings on the retained factors. The remaining 22 items loaded onto a four-factor solution.

The review of literature resulted in four major theoretical constructs underlying educator cultural competency: cultural competency, culturally responsive instruction, multicultural education, and critical race theory. Items were written for each of these

constructs and it was hypothesized that each construct would become a distinct subscale after the factor analysis. The results of the study did not support that hypothesis, as the factor analysis grouped items differently than the predicted four subscales. The remaining items overlapped theoretically, resulting in four factors that were not identical to the four constructs from the literature review: Race and Bias, Culturally Responsive Instruction, Equity, and Diversity in Education. For example, item 21, *"Native American students do not require differentiated instruction based on their cultural background,"* loaded onto the Race and Bias subscale but was originally written from the literature on culturally responsive instruction. Item 29, *"All students benefit from a diverse staff and faculty,"* was originally written from the literature of multicultural education but loaded onto the Culturally Responsive Instruction subscale.

The original constructs already had theoretical overlap in the literature and in previously used instruments, which can serve as a possible explanation for this result. For example, one requirement for quality culturally responsive instruction is cultural awareness and teachers' cultural knowledge of their students. Without such cultural awareness and cultural knowledge, content cannot be aligned to the cultural capital with which the students enter the classroom (Banks, 2001; Banks, 2012; Gay, 2010; Ladson-Billings, 1995; Sleeter, 2012). Classrooms, especially urban classrooms, are becoming increasingly more diverse, with many different ethnicities and cultures being represented in a single room. The understanding of these cultures and the ability to align instruction with various cultures also falls under the construct of multicultural education, which posits that there must be equity in education, no matter the social, economic, and cultural

differences that may be present (Banks & Banks, 2004). The results of this study suggest that these constructs are intertwined when they are applied to reality.

Both the Culturally Responsive Instruction and Equity subscales had many questions that were originally written under the construct of culturally responsive instruction. As discussed in the literature review, sociopolitical context is one component of culturally responsive pedagogy, the other two being high academic expectations and building cultural competency in students (Ladson-Billings, 1995). But the factor analysis resulted in one factor with the majority of items that related to the high academic expectations and building cultural competency while the items relating to sociopolitical context loaded onto another factor. The items relating to sociopolitical context were placed in the same factor as items relating to equity in the educational system. For example, item 30, *"Lower income families should be given financial assistance to live in wealthier neighborhoods in order for their children to attend better schools,"* and item 32, *"Schools should offer students of color opportunities that are not open for White students,"* measure attitudes towards policies that work to create more equitable systems that offer opportunities for both economically and racially oppressed groups of students. The inclusion of these items suggests that this construct is important to the framework of cultural competency in educators.

When compared to existing measures of cultural competency in educators, the constructs of the ESSD are similar, even with the addition of items based on critical race theory. Previous instruments that attempt to measure similar constructs in educators lacked critical race theory as a central theoretical construct. The ESSD attempted to include the concepts of critical race theory. Of the original 13 items stemming from

critical race theory that were in the pilot study, only 8 items were retained after the factor analysis. The majority of these items loaded onto the first factor, Race and Bias. This factor accounted for the highest percentage of variance at 30.42%, which supports the importance of the ideas of critical race theory when attempting to measure cultural competency in educators. However, some items that have wide theoretical support were excluded from the analysis by the EFA. For example, item 3 stated *"All students can succeed and overcome circumstance if they just work hard enough,"* and item 38 stated *"All students can succeed academically if they work hard and stay out of trouble."* Both items were written to address society's false idea of fairness, which translates to an educational philosophy based on meritocracy. This is an integral piece of critical race theory, yet both items were excluded from the final instrument by the EFA, which limits the instrument's ability to measure this specific component of a crucial theoretical construct.

A reliability analysis resulted in a Cronbach's alpha of .88, suggesting high overall reliability. Subscale reliability statistics ranged from .62 to .81, which ranges from medium to high reliability. Both of these results suggest that the instrument reliably measures the four factors uncovered from the factor analysis. Though two values, .62 for Factor 3 and .68 for Factor 4, were lower than the suggested acceptable level of .70, self-report measures have been shown to have lower reliability statistics. In addition, there were five items in Factor 3 and four items in Factor 4, which could further explain the lower reliability. A correlational analysis between the final version of the ESSD scale score and the CDAI scale score resulted in a statistically significant moderate positive

relationship, $r = .51$, $p < .001$. This result supports convergent validity and further construct validity for the ESSD.

The MANOVA resulted in a statistically significant difference in factor scale scores based on gender, however a further univariate analysis of variance resulted in no statistically significant difference. There were no statistically significant differences based on the other demographic variables that were analyzed. A possible explanation for this result could be the uneven group sizes of the independent variables used in the analysis (Field, 2013). For example, 76.4% of participants were female while 22.3% were male. Twenty two percent of participants had 0-5 years of experience, 13.2% had 6-10 years of experience, 19.2% of participants had 11-15 years of experience, and 45.6% of participants had more than 15 years of experience (Chapter 3, Table 2). The most distinct difference in demographic data was with race/ethnicity: 13.2% of participants were of color while the remaining 86.8% of participants were White. Such uneven group sizes, even with as robust of an analysis as a MANOVA, opens up the analysis to potential Type II error. Further studies with more even group sizes could show different results.

Implications

A major implication of this research is the need for more professional development in the areas of cultural awareness and critical race theory as both constructs relate to the educational system. As mentioned above, a large number of items that came out of the constructs of cultural awareness and critical race theory were excluded from the final instrument. An overview of the descriptive statistics showed that many of these items had many respondents choosing “Neither Disagree or Agree” as a response. One possible explanation for the exclusion of so many items is that many teachers do not have

a deep knowledge of these two constructs as they relate to education. It is also possible that respondents did not wish to honestly answer some statements, as they may have felt their opinion is not one widely held. This apparent pressure from the norms of society, especially the norms of the educational system in the Pacific Northwest, can result in participants choosing "Neither Disagree or Agree" in order to move on to the next question.

If respondents chose the middle response, resulting in the exclusion of critical race theory and cultural awareness items, further professional development geared towards preparing teachers to teach culturally diverse students and infuse the tenets of critical race theory in their curriculum and instruction would be an effective path forward. The specific nature of the professional development would require further inquiry, as different topics would be necessary for critical race theory and cultural awareness. The population of both the teachers and the students would also have to be taken into account.

Limitations

One major limitation of this study was the threat to external validity from the sample used in the pilot study. External validity refers to the extent to which the conclusion drawn from a study can be generalized to a larger population (Trochim, 2016). For the results of a study to be generalized to a larger population, there should be similarity across various aspects such as time, setting, place, and characteristics of the population. The more that these factors differ from the original population, the less generalizable the results become (Field, 2013). In this study, the EFA refined factors were based on data from public K-12 teachers in a medium-sized school district in the Pacific Northwest. Therefore, the results of the study can only be generalized to a

population similar to the one described in the study. Results will also vary based on factors such as differing districts, regions, student populations, socioeconomic conditions, and teacher demographics. Further studies that expand on the sample used in this study are needed to explore validity and reliability of the instrument with various teacher populations.

Another major limitation of this study was the use of self-report to measure the constructs that make up cultural competency in educators. Self-report measures are vulnerable to social desirability bias, which is the tendency of participants to respond to items in a way that presents themselves in a manner that matches social norms or socially acceptable behaviors (Fisher, 1993; King & Bruner, 2000). Social desirability bias is a major threat to the validity of an instrument, as participants may provide responses that do not reflect their true feelings. Therefore the instrument may not be truly measuring what it was designed to measure. Fisher, Katz, and James (2000) state that participants are motivated to bias responses due to the pressures of strongly prescribed values of the social system in which they operate. The ESSD was created to measure constructs such as multiculturalism and race and equity, which may lead some participants to respond to items in a way that reflects the attitudes of the educational system of the Pacific Northwest, which values diversity and is more likely to be open to discussing how racism operates in education and using a culturally responsive approach in their teaching. The district in which the study took place serves a diverse population, which may further add pressure on participants who may not value diversity and culturally responsive instruction but are regularly exposed to these ideas through interactions with coworkers and professional development.

One defense against social desirability bias is the use of indirect questioning, which is a projective technique of writing items. Questions are written in a way that asks respondents to answer in the perspective of another person or group (Fisher, 1993). Indirect questioning assumes that respondents project their own unconscious biases into these items in perspectives other than the first person, revealing their true attitudes towards the construct being measured. Indirect questioning was not used in this study because previous instruments did not use projective questions and the researcher wanted to create continuity between items from previous instruments and the new instrument. Another defense is the use of a social desirability scale alongside the instrument being tested. Such a scale was not used in this study because of the large number of items already included between the ESSD and CDAI, as too many items could result in lower response rates. A low correlation between a social desirability scale and the instrument being tested shows that the instrument was not confounded by social desirability bias (Fisher & Katz, 2000; King & Bruner, 2000). A significant correlation would suggest that social desirability bias may have played a role in the results of the instrument and a further regression analysis can indicate the variance explained by the bias.

Further Research

The results of this study showed that the instrument created will benefit from improvements and further pilot testing. Though the factor analysis indicated that items from the constructs of critical race theory and cultural awareness should be excluded, a repeated study with those excluded items rewritten for clarity is needed. Before the pilot study was administered, an expert panel of educators from K-12 and higher education reviewed the instrument for content validity, which suggests that the content of the items

was appropriate. Many of the excluded items still have theoretical value and rewriting for clarity may result in a clearer factor solution that better describes the underlying constructs.

In addition to exploratory factor analyses (EFA) with different samples, further data collection in order to perform a confirmatory factor analysis (CFA) could also be an avenue of future research. An EFA explores the underlying dimensions of a construct (Pett et al., 2003). No hypothesis is needed when performing an EFA, as it is exploratory and not inferential. A CFA, however, is used to match data with a known theory, which requires a hypothesis and is used in theory testing. Once more EFAs have been performed and the instrument further refined, a CFA can be performed to identify the latent constructs involved in teacher attitudes towards diversity and racism.

Studies comparing similar sample sizes of teachers of color and White teachers would also be a possible extension of this research. An analysis of survey results based on race and ethnicity was not possible with this particular sample because of the drastically uneven groups. Though an analysis between White participants and participants of color was performed, larger sample sizes are needed to further break down participants of Color into more specific ethnic groups. As the literature on culture and race continually suggests, there are differences in attitudes both between and within ethnic and racial groups. Being a teacher of color does not necessarily mean the teacher is more aware of issues in diversity and racism in education, as many different environmental and historical factors influence a single person's view of these issues. Life experiences vary among people in different ethnic and cultural groups, which mean that

further studies with larger and more diverse populations can facilitate a deeper understanding of these differences.

As self-report data come with threats to validity, both through social desirability bias and generalizability of the sample, further research that includes protections against bias would also be helpful to advance this research. As mentioned above, two possible protections are the use of indirect questioning and the addition of social desirability scale items during the administration of the instrument. Of the two, the addition of social desirability items would be more feasible, as there is extensive literature that supports the validity of such measures when used alongside the instrument development process (Fisher & Katz, 2000; King & Bruner, 2000; Larson & Bradshaw, 2017). It can be added to the instrument without concern for making the instrument too long, as the instrument went from 48 items to 22 items after the factor analysis.

Conclusion

The purpose of this study was to create a valid and reliable measure of culture competency in educators of diverse student populations. The resulting 22-item instrument consisted of four subscales: Race and Bias, Culturally Responsive Instruction, Equity, and Diversity in Education. These subscales are similar to previous instruments created to measure cultural competency and multicultural attitudes in educators, however the ESSD includes items written under the construct of critical race theory, expanding the range of constructs measured.

Of the teachers that participated in this study, 92.5% were White while the national average is about 82% White. When the results of this study are viewed through the lens of critical race theory, teacher attitudes towards cultural and ethnically diverse

students may be skewed because of the demographics of this study. Though further studies are required to refine the ESSD, it should be used by school districts as a valid and reliable measure of cultural competency in educators. The results of its implementation can help school districts provide more meaningful and targeted professional development, especially for districts that serve diverse populations of students.

As schools across the country become more diverse but the population of educators stays fairly homogeneous, many students from non-dominant cultures will face struggles due to cultural differences. As research shows, more culturally competent educators can help bridge academic gaps due to cultural differences. Though teacher preparation programs may be pushing their candidates to operate in diverse settings, teachers that are already working in these diverse environments can benefit from professional development that helps them better reach diverse student populations (Banks, 2012; Chiu *et al*, 2017; Sleeter, 2001). An instrument such as the ESSD, which measures cultural competency in educators, can help assess the attitudes of teachers to better target professional development.

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Appendix A

Letter to Study Participants

Dear Teachers of the [redacted]

I am a science teacher at [redacted] and would like your help with my dissertation. My doctoral work at SPU is related to culturally responsive instruction and multicultural education. My work at [redacted] feeds those interests as I see amazing teachers work with our diverse population every day.

My dissertation involves creating a new survey that measures teacher beliefs about student diversity based on four theoretical constructs: cultural competency, multicultural education, culturally responsive pedagogy, and critical race theory. Similar surveys exist but don't have this wide of a theoretical perspective. I believe all four constructs are important to consider as we teach the diverse populations we see on a daily basis.

A draft of my survey has been reviewed by several experts and teachers and was approved by the district's Research and Assessment Committee. The next step in the process involves having teachers take my new survey along with another survey that is commonly used in order to see how well the items in my survey are understood and how the results of both surveys relate to each other.

Each survey takes 5-7 minutes to complete. A link is provided below and in the email you received from Dr. [redacted], who supports this pilot study. Just use the scale to rate your agreement with each statement. This is a totally anonymous survey, so please respond honestly for each statement. I'm not using the survey to measure the cultural awareness of the teachers in the district, and I will make adjustments to the new survey once I have results from both surveys.

The link will be open until June 27th, the day after school is out.

Thank you for your time. I hope you have a great end of the school year and a restful summer.

Ronak Patel

Link to take the surveys: [redacted]

Appendix B

Original Educators Scale of Student Diversity (Pre-Expert Panel Validation)

For the following items, rate them on the following scale based on your agreement or disagreement with the statement:

1-Strongly Disagree	2-Disagree	3-Neither Agree Nor Disagree	4- Agree	5- Strongly Agree

1. Some cultures place a higher importance on education than others.
2. Students should be exposed to the beliefs and practices of as many different religions as possible in school.
3. Teachers should work to pronounce every students' name correctly.
4. Teachers should correct mispronunciation of student names.
5. It is appropriate to ask a minority student "Where are you originally from?"
6. America is a melting pot of cultures.
7. There are only two genders: Male and Female.
8. African American students tend to act out more than White students
9. Latino students tend to defy authority more than White students.
10. Asian students are better behaved than African American and Latino students.
11. Muslim students should be given less work if fasting during Ramadan.
12. The academic calendar should include more non-Judeo-Christian holidays.
13. As a teacher, I am comfortable teaching students of different cultural backgrounds than myself.
14. There are instances in which "non-standard" English is acceptable in school/ "Non-standard" English is not appropriate in school.
15. As a teacher, I am aware of my own biases that may affect how I interact with students.
16. I consider myself as a culturally competent educator.
17. Dress codes are equally created and enforced for boys and girls.

18. Teachers must make an effort to learn about all the various cultures and ethnicities represented in their classroom.
19. ELL students should be taught in their primary languages/ ELL students should strictly be taught in English.
20. Only students of ethnically and culturally diverse populations benefit from an equally diverse staff and faculty/
21. White students benefit from attending a school of ethnically and culturally diverse staff and faculty.
22. Teachers should create lessons that help students develop positive attitudes towards different ethnic and cultural groups
23. It is appropriate to sacrifice equal distribution of resources for the sake of educational equity.
24. A positive and equitable school culture positively impacts academic achievement.
25. Advanced Placement and Honors courses should have prerequisite course requirements.
26. Schools in higher socioeconomic neighborhoods should receive less funding and resources than those in socioeconomically lower neighborhoods.
27. Teachers should take students' cultural backgrounds into account when planning instruction.
28. I am of similar cultural background to my students.
29. The American educational system was designed to education middle class students of European descent.
30. Schools should track/group students based on academic ability.
31. Schools should track/group students based on academic interests.
32. Teachers should make an effort to be involved in their students' community.
33. Teachers should include sociopolitical context to their curriculum and instruction.
34. Teachers should teach students to question cultural norms and social institutions.
35. There is not enough/too much professional development related to culturally responsive teaching.
36. Students can see cultures and ethnicities similar to themselves in the curriculum.

37. All students can succeed academically if they work hard and stay out of trouble.
38. The cycle of poverty can be broken with a quality education.
39. Standardized tests are a quality measure of student achievement.
40. The traditional classroom has been set up to support a middle-class lifestyle.
41. All students are provided the opportunity to succeed in life after school.
42. Affirmative Action policies are a fair way to provide equitable educational opportunity.
43. Society gives White people more privileges than non-White people.
44. Racism pervades all aspects of society, including my educational workplace.
45. There are factors beyond the control of the educational system that hinder student achievement.
46. All teachers have implicit bias that affects their interactions with students.
47. Students of different ethnicities and cultures are disciplined in an equal manner.
48. Schools should offer students of color/Black/Latino opportunities that are not open for White students.
49. Students from lower socioeconomic levels should be given opportunities to attend public schools in higher socioeconomic neighborhoods.
50. Diversity of ethnicity, race, and sexual orientation in a school benefits all students.

Appendix C

Letter of Instructions to Expert Panel

Hello,

My name is Ronak Patel and I am a doctoral candidate in Education at Seattle Pacific University under the advisement of Dr. Nyaradzo Mvududu. I am also a high school science teacher in a Title I school in [redacted]. I am contacting you because I need some assistance with my dissertation.

I am attempting to create an instrument that measures cultural awareness in teachers. An extensive literature review resulted in four constructs that encompass the concept of cultural awareness as it relates to current teachers of diverse students: cultural competency, multicultural education, culturally responsive instruction, and critical race theory. With these theoretical constructs serving as subscales, I have created an initial draft instrument consisting of 48 items on a 5 point Likert-style scale in which respondents must pick from Strongly Agree to Strongly Disagree in relation to the statement.

In order to establish content validity, I need your assistance. As an expert in cultural competency and teaching diverse populations, you can accurately and effectively judge each item for its relation to the constructs of cultural competency, multicultural education, culturally responsive teaching, and critical race theory. I would greatly appreciate some of your time for this endeavor.

Using a 5 point Likert-type scale, please rate each item for its relationship and relevance to the construct it is classified under (1= *not relevant to construct* to 5 = *very relevant to construct*). I would also appreciate any comments concerning the content, wording, and readability of each item. The more feedback you can provide, the better I can refine the instrument. Items that score low will be rewritten to enhance clarity or discarded based on feedback.

Thank you for taking time out of your busy schedule to help. I greatly appreciate any assistance you can provide.

Sincerely,
Ronak Patel

Appendix D

Content Validated Educators Scale of Student Diversity (Post Expert Panel)

#	Statement	Desired Response	Construct
7	America should be described as a melting pot of cultures.	Disagree	CA
8	When a student mispronounces a peer's name, the teacher should always correct the student.	Agree	CA
15	I am aware of my own biases towards students.	Agree	CA
19	Stereotypes are the basic building blocks of cultural awareness.	Disagree	CA
20	Students should learn about the history and beliefs of many different religions in school.	Agree	CA
25	The primary religions of a district's families should have their holidays represented in the school calendar (e.g. 10 day break for Christmas, 3 day break for Eid, 2 day break for Diwali, etc.)	Agree	CA
26	Teachers should work to pronounce every students' name correctly.	Agree	CA
33	I consider myself a culturally competent educator.	Agree	CA
35	Positive stereotypes can improve the targeted population's academic performance.	Agree	CA
36	"Non-standard" English is not appropriate in academic settings.	Disagree	CA
1	My teacher credential program prepared me to teach students from different cultural backgrounds.	Disagree	CRI
5	Students should see cultures similar to their own in the curriculum.	Agree	CRI
6	Schools should group students based on academic ability.	Disagree	CRI
10	Teachers should differentiate instruction based on cultural backgrounds.	Agree	CRI
14	Schools provide adequate support for homeless students to succeed academically.	Disagree	CRI
17	The American educational system is designed to teach young people accepted social behavior	Agree	CRI

#	Statement	Desired Response	Construct
	(respect authority, be on time, follow directions, etc.)		
21	Native American students do not require differentiated instruction based on their cultural background.	Disagree	CRI
24	There is too much professional development related to culturally responsive teaching.	Disagree	CRI
27	I am effective at integrating people, events, and the values of my students' cultures in my instruction.	Agree	CRI
29	Teachers should include sociopolitical context in their curriculum and instruction.	Agree	CRI
40	Teachers should take students' cultural backgrounds into account when planning instruction.	Agree	CRI
41	The American educational system is designed to educate middle class students of European descent.	Agree	CRI
42	Teachers should help students from different cultures maintain positive attitudes about themselves.	Agree	CRI
43	Teachers should teach students to adhere to cultural norms and systems of society.	Disagree	CRI
2	Students of color are disciplined at an equal rate and manner as White students	Disagree	CRT
3	All students can succeed and overcome circumstance if they just work hard enough	Disagree	CRT
4	The traditional classroom has been set up to support a middle-class lifestyle.	Agree	CRT
12	Students from lower income families should be given priority to attend public schools in higher income neighborhoods.	Agree	CRT
22	Standardized tests are a high-quality measure of student achievement	Disagree	CRT
23	Affirmative Action policies constitute reverse discrimination.	Disagree	CRT
30	Lower income families should be given financial	Agree	CRT

#	Statement	Desired Response	Construct
	assistance to live in wealthier neighborhoods in order for their children to attend better schools.		
31	All teachers, including myself, have implicit bias that negatively affects their interactions with some students.	Agree	CRT
32	Schools should offer students of color opportunities that are not open for White students.	Agree	CRT
37	Society gives White people more privileges than people of color.	Agree	CRT
38	All students can succeed academically if they work hard and stay out of trouble.	Disagree	CRT
44	Racism pervades all aspects of society, including my educational workplace.	Agree	CRT
45	Schools should offer courses that target underserved student populations, such as African American Literature with African American History or Ethnic Studies.	Agree	CRT
9	Diversity in a school benefits all students more than homogeneity of ethnicity.	Agree	ME
11	Metal detectors make schools a safer place.	Disagree	ME
13	Teachers should be responsible for helping students develop positive attitudes towards different ethnic and cultural groups.	Agree	ME
16	English Language Learners (ELL) students should strictly be taught in English.	Disagree	ME
18	The ethnicity of the teacher does not matter when educating students.	Disagree	ME
28	Schools in higher income neighborhoods should receive less funding and resources than those in lower income neighborhoods.	Agree	ME
34	Teachers need to make an effort to learn something about all the various cultures represented in their classroom	Agree	ME
39	All students benefits from a diverse staff and faculty.	Agree	ME

#	Statement	Desired Response	Construct
46	White students benefit from attending a school of diverse staff and faculty more than from a school with a mostly White staff and faculty.	Agree	ME

Appendix E

Refined Educators Scale of Student Diversity (Post Factor Analysis)

#	Statement	Desired Response	Construct
25	The primary religions of a district's families should have their holidays represented in the school calendar (e.g. 10 day break for Christmas, 3 day break for Eid, 2 day break for Diwali, etc.)	Agree	CA
36	"Non-standard" English is not appropriate in academic settings.	Disagree	CA
5	Students should see cultures similar to their own in the curriculum.	Agree	CRI
21	Native American students do not require differentiated instruction based on their cultural background.	Disagree	CRI
29	Teachers should include sociopolitical context in their curriculum and instruction.	Agree	CRI
40	Teachers should take students' cultural backgrounds into account when planning instruction.	Agree	CRI
41	The American educational system is designed to educate middle class students of European descent.	Agree	CRI
42	Teachers should help students from different cultures maintain positive attitudes about themselves.	Agree	CRI
2	Students of color are disciplined at an equal rate and manner as White students	Disagree	CRT
4	The traditional classroom has been set up to support a middle-class lifestyle.	Agree	CRT
30	Lower income families should be given financial assistance to live in wealthier neighborhoods in order for their children to attend better schools.	Agree	CRT
31	All teachers, including myself, have implicit bias that negatively affects their interactions with some students.	Agree	CRT
32	Schools should offer students of color opportunities that are not open for White students.	Agree	CRT

#	Statement	Desired Response	Construct
37	Society gives White people more privileges than people of color.	Agree	CRT
44	Racism pervades all aspects of society, including my educational workplace.	Agree	CRT
9	Diversity in a school benefits all students more than homogeneity of ethnicity.	Agree	ME
13	Teachers should be responsible for helping students develop positive attitudes towards different ethnic and cultural groups.	Agree	ME
18	The ethnicity of the teacher does not matter when educating students.	Disagree	ME
28	Schools in higher income neighborhoods should receive less funding and resources than those in lower income neighborhoods.	Agree	ME
34	Teachers need to make an effort to learn something about all the various cultures represented in their classroom	Agree	ME
39	All students benefits from a diverse staff and faculty.	Agree	ME
46	White students benefit from attending a school of diverse staff and faculty more than from a school with a mostly White staff and faculty.	Agree	ME