

## **The Problem of Disproportional Representation of Students from Minority Races in Special Education**

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### **Abstract**

*The purpose of this study was to investigate the effects of integrating culturally responsive instruction (CRI) into a course hosted by the school of education at a higher education institution. The study participants were pre-service teachers who completed a pre-course survey and a post-course survey designed to discern their views on the factors that contribute to the disproportionality problem in schools. The participants were also asked to write and subsequently alter lesson plans to reflect their knowledge of CRI. The discussions and activities included in this project aimed to develop responsive instructional approaches with the ability to reshape the curriculum. The positive influence of this project is clear based on the participants' responses and the quality of their altered lesson plans. The results based on qualitative and quantitative methods are discussed.*

**Keywords:** *Diversity, disproportionality, culturally responsive curriculum, pre-service teachers, teachers' preparation programs.*

## Introduction

A problem that mandates serious remediation is the disproportional representation of minority groups in special education. The issue of overrepresentation is more pronounced in the diagnoses of high-incidence disabilities (e.g., specific learning disabilities, emotional and behavioral disorders, mild cognitive disabilities) than in the diagnoses of low-incidence disabilities (e.g., severe cognitive disabilities, deaf/blindness, cerebral palsy) (Arnold & Lassmann, 2003). The diagnosis process for these two groups of disabilities differs significantly (Reschley, 1988). The diagnoses of high-incidence disabilities, such as emotional disorders and specific learning disabilities, include “judgment categories” that are based on professional judgment (MacMillan & Reschley, 1998). In other words, the diagnoses of high-incidence disabilities are based on a social and behavioral model, whereas the diagnoses of low-incidence disabilities are based on a medical model (Vallas, 2009). The very nature of a high-incidence disability that allows students to overcome the associated conditions can also facilitate incorrect diagnoses and subsequent placement in special education (Eads, Arnold, & Tyler, 1995).

Many of the suggested factors that contribute to these disparities are complex, as the factors are interrelated and interact with one another, making it increasingly complicated to mitigate this phenomenon. Most researchers who investigate the leading factors contributing to the disproportionality problem appear to agree that the majority of these factors can be classified according to the following three major variables: social demographic variables, general education and related resource inequity variables, and variables related to the special education process (Skiba et al., 2006).

An examination of the social demographic factors associated with the disproportionality problem reveals that minority students are more likely to be enrolled in lower-track courses offered by schools with weaker academic standards because these students generally attend low-performing schools (Skiba et al., 2006). A large resource inequity among different races and classes is also documented (Togut, 2011), with the devastating consequences of poverty causing children to be ill prepared and lacking in school readiness (Skiba et al., 2006).

Cultural reproduction theory was further developed to explain the reproduction of class-based differences. The theory posits that class and racial inequities are reproduced through reoccurring decisions and behaviors that can be avoided if the relevant decision makers have the necessary knowledge and awareness (Skiba, Bush, & Knesting 2002; Stanton-Salazar, 1997)

General education and related factors contribute significantly to this problem, as inconsistent practices have been found in relation to the pre-referral process (Arnold & Lassmann, 2003). An African-American male who is behaving according to the norms of his local Black/African American community may be perceived by teachers who are unfamiliar with these norms as disruptive and threatening. These factors and others may explain why teachers refer minority students to special education programs more frequently than non-minority students for behavioral rather than academic problems (Gottlieb, Gottlieb & Trongue, 1991).

The assessment and evaluation process may be perceived as subjective, as it may be influenced by school politics and the perspectives of referring teachers (Harry, Klingner, Sturges, & Moore, 2002). According to the critiques identified by teachers, the time spent in the process of referral, assessment, and decision making is longer than the time needed to understand a student’s areas of concerns (Skiba, Bush, & Knesting 2002). High-stakes testing is correlated with dropping out of school and retention rates for all students, but this correlation is stronger for poor and minority students. The typical students retained include poor males, Hispanic students,

and Black/African American students (Togut, 2004). Many teachers perceive high-stakes testing as creating pressure on both teachers and parents. Referrals for special education evaluations provide adequate justification for students' low performance; hence, the evaluations and accountability of teachers and schools are likely to be relatively unaffected by this low performance (Skiba, Bush, & Knesting 2002).

### **The Size of the Problem**

According to the U.S. Department of Education (USDE) 30<sup>th</sup> Annual Report to Congress on the implementation of the Individuals with Disabilities Education Act (IDEA) (2008), the "Risk Index" is calculated by dividing the number of children/students in a specific age group served by the IDEA according to racial/ethnic groups by the estimated resident population of the same age group according to racial/ethnic groups in the U.S. and then multiplying the results by 100. The Risk Index for All Other Racial/Ethnic Groups Combined is calculated by dividing the number of children/students in a specific age group served by the IDEA across all other racial/ethnic groups by the estimated number of U.S. residents of the same age group across all other racial/ethnic groups and then multiplying the results by 100. The term "all groups" includes the following: American Indian/Alaska Native, Asian/Pacific Islander, black (not Hispanic), Hispanic, and white (not Hispanic). Finally, a "Risk Ratio" is calculated by dividing the Risk Index for each racial/ethnic group by the Risk Index for all other racial/ethnic groups combined. If, for example, a certain racial/ethnic group has a Risk Ratio equal to two with regard to receiving an intervention, then that group's likelihood of receiving that intervention is twice as large as the likelihood for all other racial/ethnic groups combined (United States Department of Education [USDE], 2008). For the purpose of this review, we use the Risk Ratio to discuss the size of the problem.

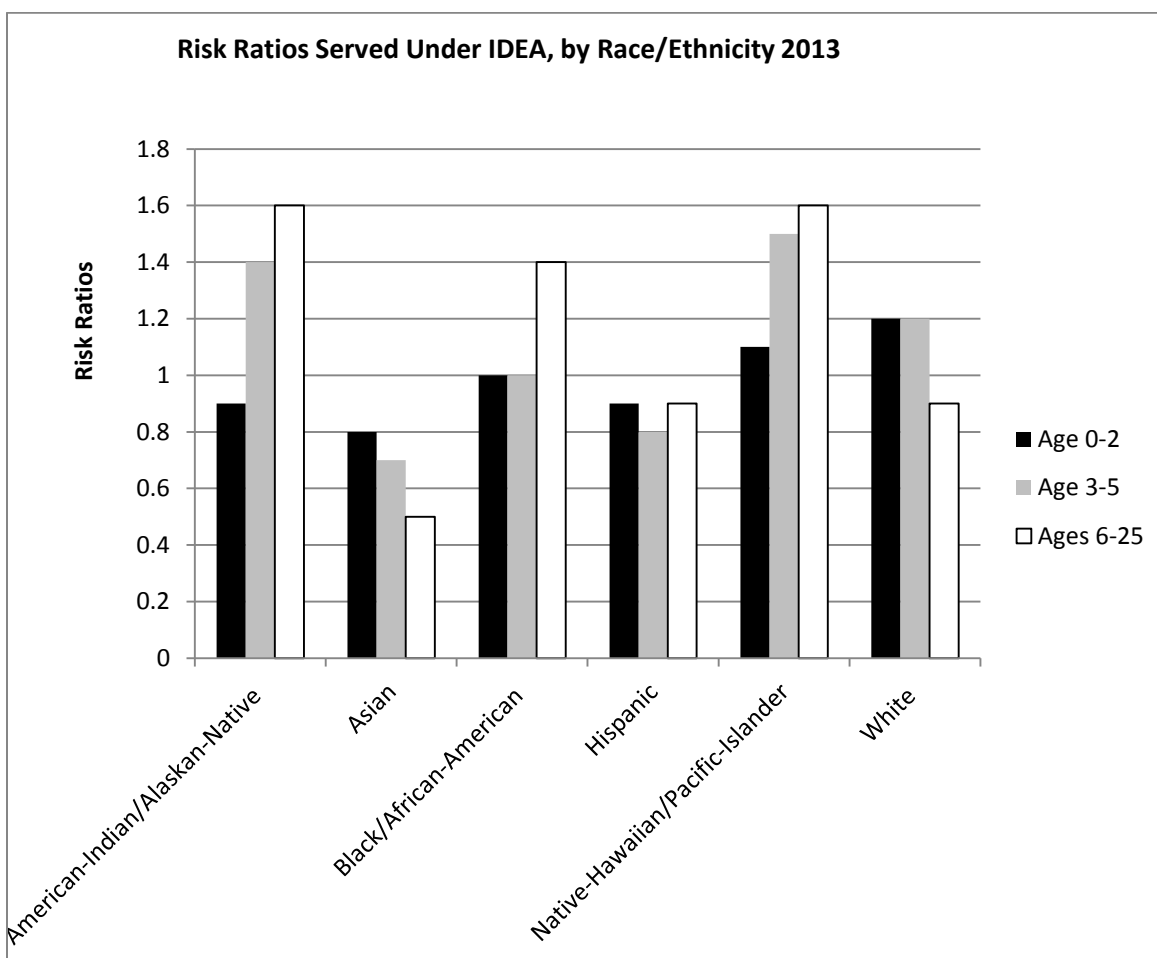
The most recently reviewed Report to Congress on the Implementation of the IDEA (USDE, 2013) reported that infants and toddlers (from birth to age two) who were of American Indian/Alaska Native, Asian, and Hispanic ethnicities had Risk Ratios of .9, .8, and .9, respectively; thus, they were slightly less likely than toddlers and infants of all other racial/ethnic groups combined to be served by IDEA. Native Hawaiian/other Pacific Islander and white children had Risk Ratios of 1.1 and 1.2, respectively, indicating that these infants and toddlers were slightly more likely than all other racial/ethnic groups combined to be served by IDEA. Black/African-American children ages 0-2 had a Risk Ratio of 1.0, which indicates that they were as likely as children in all other racial/ethnic groups combined to be served by IDEA (United States Department of Education (USDE), 2013).

Children aged three through five who were of American Indian/Alaska Native, Native Hawaiian/other Pacific Islander, or white descent had Risk Ratios of 1.4, 1.5, and 1.2, respectively; hence, these children were more likely to be served by IDEA than children of other groups. Asian and Hispanic children had Risk Ratios of .7 and .8, respectively, indicating that these children were less likely to be served by IDEA than other groups of children. Black/African-American children aged three through five had a Risk Ratio of 1; hence, they were as likely as children across all other racial/ethnic groups combined to be served by IDEA (United States Department of Education (USDE), 2013).

American Indian/Alaska Native, Black/African-American, and Native Hawaiian/other Pacific Islander students aged 6 through 21 years were more likely to be served by IDEA than students

in all other racial/ethnic groups combined, with Risk Ratios of 1.6, 1.4, and 1.6, respectively. Asian, Hispanic, and white students aged 6 through 21 years were less likely to be served by IDEA, with Risk Ratios of .5, .9, and .9, respectively (United States Department of Education (USDE), 2013).

An examination of the Risk Ratios of students aged 6-21 years served by IDEA reveals that the Risk Ratios for younger ages are smaller than those for older ages, except for students of Asian and white backgrounds. As students age, the gap between their abilities and those of their peers increases. According to Graph 1, the number of Indian/Alaskan Native, Black/African-American, and Native Hawaiian/Pacific Islander students served by IDEA increases along with the students' ages.



**Figure 1. Risk Ratios for Groups of Students between 0- and 25-Years-Old Served by IDEA in 2013**

*Note:* The graph was based on data retrieved from the 35<sup>th</sup> Annual Report to Congress regarding the Implementation of IDEA, 2013, U.S. Department of Education.

The percentages of students diagnosed with different disabilities vary across ethnicity groups. Specific learning disabilities are the most prevalent within each group of students from 6 to 21

years old. The percentages of students aged 6- to 21 years diagnosed with emotional and behavioral disorders according to racial/ethnic groups were as follows: Black/African-American (9.1%), American Indian/Alaskan Native (6.7%), white (6.5%), Native Hawaiian/other Pacific Islander (5.5%), Hispanic (4%), and Asian (2.5%) (United States Department of Education [USDE], 2013). Thus, the data suggest that students from specific racial/ethnic backgrounds have more referrals for emotional disorders, including behavioral challenges, compared with other groups (see Graph 1).

### **Culturally Responsive Teaching**

Gay (2000) described culturally responsive teaching (CRT) as a validating, multidimensional method that integrates students' knowledge and culture into varied learning experiences. This approach is comprehensive in that it addresses the child as a whole. CRT can also be described as transformative, liberating, and empowering (Gay 2000). One of the most influential factors in the process of teaching students from diverse cultural backgrounds and/or lower socioeconomic levels is the aim to connect school and classroom experiences in a culturally relevant manner (Schmidt, 2005). Ensuring connections among home, school, and community environments promotes literacy and academic achievement (McCaleb, 1994; Schmidt, 2005). Because many students from diverse backgrounds perceive discontinuity between their lives at school and their home life, it is imperative for teachers and schools to connect with students and their families. This connection promotes the relevance of and positive attitudes toward school and consequently contributes to narrowing the academic gap (Edwards, 2004; Edwards, Pleasants, & Franklin, 1999; Ladson-Billings, 1995). Efforts to create this connection between home and school should not merely occur spontaneously; rather, it should be embedded in the lesson plans that teachers implement on a daily basis. Teachers should incorporate students' home-based literacies, experiences, talents, and resources into the daily teaching and learning experiences in the classroom (Edwards, 2004).

The purpose of the current study was to promote participants' knowledge by developing culturally responsive standards-based lesson plans. In a previous research review, Schmidt (2005) identified seven characteristics of culturally responsive instruction (CRI): high expectations, building relationships with families and communities, reshaping the curriculum, active teaching, teachers as facilitators, student participation, and grouping (Schmidt, 2005). The process and results of integrating culturally responsive standards-based curriculum/teaching into a required course in the School of Education at a higher education institution will be described below. Another purpose of the current study was to investigate the effect of this integration on participants' knowledge and perspective on issues related to diversity. According to Groski's analysis of multicultural teacher education (MTE) (2008), the structure of the discussions and activities used in this integration process can be described as liberal teaching with multicultural competence.

### **Methodology**

#### **Participants**

Forty-seven participants with different majors in the School of Education were enrolled in the "Inclusion of Students with Exceptional Needs" course as part of their required professional studies (see Tables 1 and 2). Enrolled participants met with their instructor in class twice a week

for 13 weeks. One major goal of this course was to discuss the inclusion of students with exceptional educational needs in regular classrooms, in addition to discussing the laws, definitions, characteristics, adaptations, strategies and transitional services that pertain to persons with special needs. This course was used to integrate diversity and CRT.

**Table1. Participants' Major Fields of Study**

Participants' Programs/Majors	Technology Education and Applied Sciences				Humanities and Art Education		Humanities and Pupil Service				Total
	Technology Education	Marketing and Business Education	Math Education	Science Education	Family/Consumer Science Education	Art Education	Special Education	Vocational Rehabilitation	Early Childhood Education	Pre-Grad School	
	14	5	1	1	4	9	6	3	2	2	47

**Table 2. Participants' Level of Study**

	Freshman	Junior	Sophomore	Senior	Pre-Grad	Total
Participants' Level	4	6	15	20	2	47

## Procedures

During the first week of this project and at regular class meetings, the participants were asked to complete a pre-course survey that measured their awareness of and ability to articulate the challenges of teaching students from diverse backgrounds (Appendix A). In their prospective programs, the participants were asked to write lesson plans on a topic related to their major field of study. During the following six weeks, they were encouraged to explore their own backgrounds by candidly discussing their cultural situations while growing up, including where they lived, their socioeconomic status, their ethnic or cultural background, and their spiritual traditions. A large proportion of the discussion that followed included a review of the research related to the disproportional representation of racial groups and the different factors that may have contributed to this disproportionality, including social and demographic variables, the inequity of general education and related resources, and the special education process. Small-group and whole-group discussions were encouraged to help students engage in critical, reflective, and analytical thinking regarding the possible factors contributing to these disparities. The participants were provided with the opportunity to compare their analyses of the disproportionality problem with existing analyses in the literature.

The next two weeks included discussions regarding the concept of CRT and its components: high expectations, cultural sensitivity-reshaped curriculum, active teaching methods, teachers as facilitators, partial student control, group-based instruction, and positive relationships with families and communities (Gay, 2010; Schmidt, 2005). The participants then analyzed and discussed the lesson plans (Schmidt, 2005) that were written and implemented according to the practical guidelines from the CRT perspective. Near the end of the semester, the participants modified the lesson plans that they had written at the beginning of the semester to reflect their new knowledge of CRT. The survey that was administered at the beginning of the semester was again provided at the end of the semester (Appendix A).

## Results

### Quantitative

The participants' majors were categorized into three groups to allow for referential statistical analyses: (a) a Technology Education and Applied Sciences group (i.e., math education, science education, and marketing and business science education), (b) a Humanities group (i.e., family and consumer science education and art education), and (C) a Humanities and Pupil Services group (i.e., special education, early childhood education, vocational rehabilitation, and school counseling). This study attempted to answer the following questions:

- Are there significant differences among participants with different majors in their responses to the pre-course survey and post-course survey statement "Schools and teachers encounter challenges when working with students from diverse backgrounds (e.g., African-American, Native American, Hmong, Hispanic)"? The independent variable was the different majors. The dependent variable was the participants' self-ratings using a Likert scale of 1-5, with 5 indicating strong disagreement. The ANOVA result was not significant,  $F(2, 44)=.154, p=.86$ .
- Are there significant differences among participants with different majors in their responses to the pre-course survey and post-course survey statement "I have the necessary tools to write culturally responsive lesson plans"? The independent variable was the different majors. The dependent variable was the participants' self-ratings using a Likert scale of 1-5, with 5 indicating strong disagreement. The ANOVA result was significant,  $F(2, 44)=6.59, p=.003$ . A post hoc test was conducted to evaluate the pairwise differences between the means. The results revealed significant differences in the means between the Humanities and Pupil Services group and the Humanities and Art Education and Technology Education and Applied Sciences groups. The Humanities and Pupil Services group rated themselves more positively in possessing the necessary tools to write culturally responsive lesson plans ( $M=1.65, SD=.47$ ) compared with the self-ratings of the Humanities and Art Education group ( $M=2.35, SD=.625$ ) and the Technology Education and Applied Sciences group ( $M=2.31, SD=.58$ ).
- Are there significant differences among participants from different majors in response to the pre-course survey and post-course survey statement "It is my responsibility as a teacher to use culturally responsive instruction"? The independent variable was the different majors. The dependent variable was the participants' self-ratings using a Likert scale of 1-5, with 5 indicating strong disagreement. The ANOVA result was significant,  $F(2, 44)=4.52, p=.016$ . However, post hoc analyses were not possible because one of the

subgroups had only 2 participants. Therefore, the direction of the level of significance is unclear, although an examination of the means for each group reveals that the Humanities and Pupil Services group agreed more with the statement ( $M=1.12$ ,  $SD=1.22$ ) than did the Humanities and Art Education group ( $M=1.5$ ,  $SD=.50$ ) and the Technology Education and Applied Sciences group ( $M=1.52$ ,  $SD=.43$ ).

## Qualitative

**Description of the problem and contributing factors.** The participants were asked to describe some of the challenges that schools and teachers encounter when teaching students from diverse backgrounds. In general, the participants were more articulate when describing the factors causing these challenges or leading to the disproportionality problem than they were when providing descriptions of these challenges. Therefore, the suggested factors were compared to the factors that previous studies have identified as contributing to the disproportionality problem.

Resource inequity and other consequences related to poverty have been documented in previous literature as social and demographic factors that contribute greatly to the disproportionality problem. In the current study, the social factors associated with poverty and its related manifestations were identified by the participants as factors resulting in disproportionality less often than factors related to the educational system. However, the participants implicitly suggested that poverty was a factor contributing to the disproportionality problem, as their implicit responses mentioned a lack of family involvement, student anger resulting from their life conditions, and family and health issues. Poverty and its related manifestations were discussed more frequently in the pre-course survey than in the post-course survey. The latter included more specific language related to teachers and schools as factors contributing to the disproportionality problem.

Inconsistent practices related to the pre-referral of minority students to special education evaluation, particularly for disciplinary problems, is a well-documented factor associated with the overrepresentation of minority students in special education (Gottlieb, Gottlieb, & Trongue, 1991). In the current study, the term “discrimination” was evident in the participants’ responses when referring to teachers who are biased toward students from minority backgrounds. Other responses reflected a more implicit view of teachers, schools, and/or the system as discriminating against those students. In both the pre-course survey and the post-course survey, the participants did not distinguish between the practices of special education teachers and general education teachers, which could explain the disproportionality problem. Examples of such responses include the following: discriminated against students, being prejudiced, mistaking a second language for a disability, not accommodating English language learners (ELLs), not relating to students’ cultures, excluding students’ cultures from the curriculum, using a curriculum based on a single cultural perspective, using a curriculum that may be offensive to some cultures, insufficient efforts by schools to communicate with students and their families, parents feeling unwelcome in the school, a number of behavioral patterns related to a particular culture being mistaken for a disability, self-fulfilling prophecies, and teachers blaming students’ backgrounds for their academic and behavioral struggles.

Although most responses indicated a mishandling of cultural differences by teachers or the school system, some responses indicated that students’ cultural differences did not meet the



schools' standards and codes of conduct, which suggests that the responsibilities lies solely with students and their cultures. Responses that arose in the pre-course survey but not in the post-course survey included the following: students are offended easily based on values that are embedded in their culture; many minority groups are poor, which results in problems; education is not important in some cultures; and hygiene is not important in some cultures.

**Direct definition of CRI.** The participants were asked to define CRI and provide examples. Their responses were compared with how CRI has been identified in the literature: high expectations, cultural sensitivity-reshaped curriculum, active teaching methods, teachers as facilitators, partial student control, group-based instruction, and positive relationships with families and communities (Gay, 2010). The most frequently identified component in both the pre-course survey and the post-course survey was reshaping the curriculum. The components that occurred only in the post-course survey were high expectations, active teaching methods, partial student control, and teachers as facilitators. Another difference between the pre-course survey and the post-course survey was the perception of accommodations as being instructional: curricular accommodations were discussed in the post-course survey, whereas only environmental and social accommodations were discussed in the pre-course survey. The number of examples of instructional and curricular accommodations that participants provided was nearly double in the post-course survey compared with the pre-course survey.

**Indirect definition integrating CRI into lesson plans.** The participants were asked to develop lesson plans that they believed to be culturally responsive prior to their discussions of the disproportionality problem and the components of CRI (pre-discussion lesson plans). The participants were subsequently asked to revise these lesson plans to reflect the CRI components (post-discussion lesson plans). The "pre-discussion lesson plans" lacked procedures or activities directed toward creating positive family and community communication, teaching practices that reflected high expectations, teachers serving as facilitators, and students having partial control over the lesson. The components that were identified most often in the "post-discussion lesson plans" were group-based instruction and active teaching methods. The components that were integrated into post-discussion lesson plans the least often were high expectations, teachers as facilitators, and students' partial control over the lesson.

## **Discussion and Conclusion**

### **Quantitative: How Familiar Participants Are with CRI**

The participants in the Humanities and Pupil Services group (i.e., special education, early childhood education, and vocational rehabilitation) rated themselves more positively in having the necessary tools to write culturally responsive lesson plans compared with the ratings of the other two groups. This result may have arisen because the participants in those majors are required to have more practicum experience within their programs than the participants with other majors. Moreover, the nature of their majors is closely related to working with students with special needs who may require accommodations and modifications to their academic, behavioral, vocational, and/or social learning experiences.

To further our understanding of this result, participants' confidence about having the necessary tools to write culturally responsive lesson plans, as measured by the pre-course survey was examined rather than focusing on the differences between the pre-course survey and post-course survey. An ANOVA was conducted to examine the responses to the following statement

on the pre-course survey: “I have the necessary tools to write culturally responsive lesson plans.” The ANOVA result was significant,  $F(2,43)=7.99, p=.001$ . The participants from the Humanities and Art Education group were the most confident when responding to this statement ( $M=2.00, SD=.71$ ), followed by those from the Humanities and Pupil Services group ( $M=2.83, SD=.58$ ) and the Technology Education and Applied Sciences group ( $M=2.9, SD=.70$ ). Therefore, participants from all majors became more confident in their agreement with the above statement, but participants from the Humanities and Art Education group began the course with higher confidence levels compared with the other two groups of majors. This finding suggests that the participants in the Humanities and Pupil Services group experienced the greatest gains. However, the question arises as to why the participants from the Humanities and Art Education group began the course with higher confidence levels. One possibility is that some variables were overlooked in the current study; these variables could include taking other courses related to multiculturalism and/or the social and economic narratives in which those participants have adopted.

### **Qualitative: Participants’ Views of the Factors Contributing to the Disproportionality Problem**

The course included two types of discussions: whole-group and small-group discussions. The participants shared information regarding their own cultures and backgrounds in small groups. During the course of the semester, the participants discussed factors related to the disproportionality problem. Based solely on frequency measures, the participants were more reserved at the beginning of the semester and were less likely to raise their hands and voice their opinions on poverty, race, school systems, teaching practices, and cultural values. The participants who did raise their hands to share opinions during whole-group discussions at the beginning of the semester continued to do so throughout the duration of the course. The frequency of participation increased as more students chose to participate in the whole-group discussions. Notably, the instructor needed to avoid taking sides during the discussions and instead needed to inquire about opposing perspectives to gain insight. Furthermore, the instructor was a person who was not born and raised in the U.S.; hence, it was important that she remain sensitive to and respectful of the evolution of social and historical contexts that she had not witnessed herself but had learned about subsequently.

In the pre-course survey, the number of responses connecting factors of poverty and its manifestations to the disproportionality problem was greater than the number of responses noting factors related to the educational system. However, in the post-course survey responses, the participants discussed factors related to the educational system as causing the disproportionality problem. In fact, responses of this nature doubled in the post-course survey relative to the pre-course survey. This result is important, because it suggests a shift in perspective from uncontrollable factors (e.g., “Students’ cultures and socioeconomic statuses are out of my control”) to controllable factors (e.g., “I am a teacher, and I am part of the educational system”). Understanding that some factors within the educational system contribute to the disproportionality problem increased the participants’ sense of responsibility and ownership of the problem.

Another gain that was observed in the post-course survey was the increase in the use of academic language. The participants avoided describing the problem using colloquial language and preferred to use expressions that are frequently used in the literature, including terms such as

“different learning styles,” “differentiating instruction,” “inclusion,” “English language learners,” and “universal design for learning.” Similarly, in the post-course survey, the participants avoided expressions such as “some cultures don’t strongly value education” and “some cultures don’t care about hygiene.” Notably, the instructor did not discuss those pre-course survey expressions with the participants; thus, this finding indicates that the participants decided to change on their own rather than being explicitly instructed to change.

### **Qualitative: CRI in Lesson Plans**

In the post-course survey, the participants were more articulate when providing specific examples of CRI. An art education major suggested introducing Japanese art in a lesson. Another lesson proposed by an art education major included active teaching methods, such as allowing student input when using coil techniques. Furthermore, a family and consumer science major included Native American recipes in a lesson plan instructing on a healthy diet. A technology education major suggested taking a field trip to observe housing designs in the community prior to discussing drafting and graphing. Moreover, participants in the marketing and business education major used mnemonics from Native American culture to help in teach keyboarding techniques. Notably, the few accommodations that were suggested in the “pre-discussion lesson plan” were often environmental changes, such as hanging posters on walls referring to different cultures or inviting students to wear traditional costumes. In the “post-discussion lesson plan,” however, such responses arose less frequently, and the dominant nature of the suggested accommodations resembled instructional and curricular accommodations.

The component of high expectations was not evident in the post-discussion lesson plans. The participants discussed their integration of this component by describing the state and common core standards corresponding to their lesson plans. The inability to articulate how a teacher can demonstrate high expectations may be explained by the lack of implementation of these lessons. The participants’ understanding of the components of students’ partial control of the lesson and teachers as facilitators remains unclear. Because the participants were pre-service teachers who lacked consistent experience teaching grade school students, they had not yet developed strategies that would allow their students to facilitate their own learning.

Using Groski's analysis of MTE (2008), the current project can be described as liberal teaching with multicultural competence. Although some activities included some characteristics of the programs analyzed by Groski (2008) as being conservative and/or critical, the majority of the discussions and activities were focused on culturally responsive curriculum and differentiating instruction. The participants in this study appeared to begin the class with positive attitudes, as shown in their pre-course survey responses; hence, the change observed in their responses cannot be considered revolutionary. However, this study significantly affected on the degree to which the participants were able to articulate challenges and successes related to diversity and to create CRI-based lesson plans. One limitation of the current study is related to its sample size. Furthermore, this study did not measure the practical effects of the project. Therefore, one recommendation is that CRI-based lesson plans should be implemented in school settings to gain a better understanding of how to better prepare teachers for the increasing diversity of today’s classrooms.

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**Appendix A**

Pre-Course Survey and Post-Course Survey: *Pre-Service Teachers' Knowledge of CRI and the Disproportionality Problem*

What is culturally responsive instruction?	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Schools/teachers face challenges when working with students from diverse backgrounds (e.g., African Americans, Native Americans, Hmong, Hispanic).					
It is my responsibility as a teacher to use culturally responsive instruction.					
I have the necessary tools to write a culturally responsive lesson plan.					
Describe some of the challenges that schools and/or teachers encounter when interacting with students of diverse backgrounds (e.g., African Americans, Native Americans, Hmong, Hispanic).					
Describe some of the <u>behavioral</u> challenges that teachers encounter when interacting with students from diverse backgrounds (e.g., African Americans, Native Americans, Hmong, Hispanic).					
Provide two examples of culturally responsive teaching instruction.					