

CULTURALLY COMPETENT EVALUATIONS

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Significant growth in the number of English language learners (ELLs) in U.S. schools is anticipated to continue, demanding that educators and evaluators have the skills necessary to distinguishing language difference from disability and provide appropriate services to these students. However, little research exists examining the role of evaluator's cultural competence in evaluating ELLs for special education; furthermore, what does exist shows that many evaluators report low levels of self-efficacy as it relates to assessing ELLs.

The first chapter of the dissertation reports on a review of 21 articles conducted to address best practices for evaluating culturally and linguistically diverse (CLD) learners, evaluator self-efficacy, and recommendations for conducting culturally competent assessments and evaluations. The majority of the articles identified in this review focused on recommendations for best practices for conducting evaluations rather than reporting empirical findings related to the topic. Only one study was identified that focused on appropriate training needed by evaluation staff to effectively discriminate between language difference and a disability. Based on the findings of this review, additional research, using a rigorous methodology is needed.

Addressing that need, the second chapter reports the results of a study conducted to examine the effectiveness of Project PEAC³E (Preparing Evaluators to Accurately Conduct Culturally Competent Evaluations), a reform-oriented professional development model, using case-based activities designed to increase evaluators' sense of self-efficacy, cultural competence, and the accuracy of evaluator eligibility decisions for ELLs. The study found that Project PEAC³E was effective in increasing evaluator self-efficacy.

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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS.....	iii
CULTURALLY RESPONSIVE EVALUATION PRACTICES IN SPECIAL EDUCATION EVALUATIONS: A SYSTEMATIC JOURNAL REVIEW	1
Abstract	1
Introduction.....	1
CLD Students Interaction with Special Education	2
Challenges in Serving English Language Learners	3
Importance of Evaluator Cultural Competence	3
Study Purpose	5
Method	5
Search Procedures	5
Identification of Studies	6
Results.....	8
Culturally Competent Evaluation Practices	9
Building Cultural Competence	10
Recognizing Potential Areas of Bias	10
Developing Respect for Cultural Differences.....	12
Self-Efficacy	12
Discussion.....	14
Study Limitations.....	16
Recommendations for Future Research	17
References.....	17
CULTURALLY COMPETENT EVALUATIONS.....	23
Abstract.....	23
Introduction.....	23
Educator Self-Efficacy.....	24
Culturally Competent Evaluations	25
Effective Professional Learning Using Case Studies.....	27
Purpose.....	28

Methods.....	29
Participants.....	29
Procedure	30
Intervention.....	31
Control Group.....	32
Results.....	33
Survey Results	33
Case Study Results.....	35
Discussion	38
Summary of Findings.....	38
Study Limitations.....	40
Conclusion	42
References.....	44
APPENDIX A. CULTURALLY COMPETENT EVALUATION EXTENDED LITERATURE REVIEW	48
APPENDIX B. METHODOLOGICAL REVIEW	74
APPENDIX C. INSTITUTIONAL REVIEW BOARD DOCUMENTATION	88
APPENDIX D. EXPANDED RESULTS	94
APPENDIX E. EXTENDED DISCUSSION	109
COMPREHENSIVE REFERENCE LIST.....	118

CULTURALLY RESPONSIVE EVALUATION PRACTICES IN SPECIAL EDUCATION EVALUATIONS: A SYSTEMATIC JOURNAL REVIEW

Abstract

Significant growth in the number of English language learners (ELLs) in U.S. schools is anticipated to continue, demanding that educators and evaluators have the skills necessary to distinguishing language difference from disability and provide appropriate services to these students. The purpose of this literature review is to examine factors associated with inappropriate identification and the role evaluator cultural competence in these decisions, as well as, identify cultural relevant assessment practices. A review of 21 articles was conducted addressing best practices for evaluating culturally and linguistically diverse (CLD) learners, evaluator self-efficacy, and recommendations for conducting culturally competent assessments and evaluations. The results of this literature review serve to inform the field regarding recommended practice and next steps in preparing evaluators to appropriately serve our diverse student body.

Keywords: culturally and linguistically diverse learners, teacher self-efficacy, special education, culturally relevant practices, English language learners

Introduction

Culturally and/or linguistically diverse (CLD) learners represent one of the fastest growing groups of school-age students in the United States (Ruiz Soto, Hooker, & Batalova, 2015), growing 60% in the last decade. This is significant when considering that the growth of the general school population was only 7% (Grantmakers for Education, 2013). This diverse group includes students representing more than 400 languages, with approximately 80% speaking Spanish (Kena, Hussar, McFarland, de Brey, Musu-Gillette, Wang, Zhang, Rathbun, Wilkinson-Flicker, Diliberti, Barmer, Bullock Mann, & Dunlop Velez, 2016). According to the

Condition of Education (2016) report, public schools are more racially, ethnically, and linguistically diverse than ever before, and this demographic shift is expected to continue (Kena et al., 2016). It is estimated that by the year 2030 English learners will comprise approximately 40% of the school age population (Artiles, Kozleski, Trent, Osher & Ortiz, 2010; Collier & Thomas, 2009).

CLD Students Interaction with Special Education

Historically, much of the research in special education has focused on the overrepresentation of some cultural groups in certain eligibility categories (Artiles et al., 2010; Chamberlain, 2005). For example, a study conducted by de Valenzuela, Copeland, Qi, and Park (2006) revealed that ELLs were twice as likely to be identified as having an intellectual disability, speech-language impairment or learning disability than their White peers. Conversely, Morgan et al. (2015) indicate that minorities are disproportionately underrepresented in special education based on longitudinal evidence across high-incidence disability categories. Whether over- or under- identified, misidentification of ELLs in special education is a problem because it leads to inappropriate educational placement and service provision for our students. Overidentification can also negatively impact these cultural groups by perpetuating stereotypes about (Chamberlain, 2005), lowering classroom expectations (Ford, 2012), and denying access to the same rigorous curriculum that students without disabilities receive Artiles et al., 2005). As a result, these students are often ill-prepared for the demands of the next grade level and are less likely finish high school than their peers without disabilities (Artiles et al., 2005).

Challenges in Serving English Language Learners

In the case of ELLs, educators' or evaluators' lack or limited knowledge of the primary characteristics of second language acquisition can make distinguishing between disability and incomplete language learning a complex task (Klingner & Harry, 2006). Students acquiring English as a second language may appear to have less developed vocabulary, grammar, and comprehension than their native English-speaking peers (Navarrete & Watson, 2013), mirroring characteristics associated with specific learning disabilities (Collier & Thomas, 2009). However, there is a significant difference between the development of the native language or first language (L1) and the learning of a second language (L2) (Cummins, 1983; Collier & Thomas, 2009). For a student to become proficient in L2, both basic interpersonal communication skills (BICS) and cognitive academic language proficiency (CALP) must be developed. Though BICS may develop relatively quickly (0-2 years), developing CALP in English requires approximately 5 to 7 years (or longer) of English instruction (Collier & Thomas, 2009). Unfortunately, many educators have limited understanding of cultural and linguistic differences and report a lack of self-efficacy as it relates to educating ELLs. This lack of self-efficacy and knowledge of culturally responsive teaching practices (Aud & Hussar, 2011; Butterfield & Read, 2011; Ford, 2012; Gay, 2010), often leaves educators referring ELLs for special education testing based on their misperceptions of the developmental process of second language acquisition.

Importance of Evaluator Cultural Competence

Special education is often one of the supports teachers seek, regardless of the appropriateness of this service. For this reason, it is crucial for evaluation staff to have the necessary skills and knowledge to differentiate appropriately between a language difference and

a true disability, thereby avoiding an inappropriate diagnosis and educational placement. Evaluation professionals, including educational diagnosticians, licensed specialists in school psychology (LSSPs), and Speech-Language Pathologists (SLPs), are charged to conduct comprehensive assessments which consider potential cultural and linguistic issues for the purpose of determining the presence or absence of a disability based on the Individuals with Disabilities Education Improvement Act (IDEIA, 2004). In fact, special education evaluators are required by professional licensure, certification, and professional organization standards to consider cultural and linguistic issues when testing diverse learners and receive training in relevant knowledge and experiences regarding the role of cultural diversity (American Psychological Association, 2002; American Speech and Hearing Association, 2004; Council for Exceptional Children, 2005; IDEIA, 2004).

Previous studies have examined variables associated with those factors influencing referrals of ELLs special education, cultural relevant practices for evaluating English learners, as well as with over-identification and mis-identification of ELLs for special education services (Banerjee & Guiberson, 2012; Blatchley & Lau, 2010a; Klingner, Artiles, & Barletta, 2006). However, little empirical research has focused on evaluator sense of self-efficacy and cultural competence as it relates to appropriately evaluating and diagnosing ELLs with disabilities. It is critical that special education evaluators apply the principles of culturally responsive teaching to evaluation practices to ensure accurate decisions regarding student eligibility. In light of the current issue of disproportionality and misidentification of ELLs as needing special education, evaluation practitioners must play a critical role in reducing the number of ELLs inappropriately placed in special education due to language and environmental factors rather than innate disabilities (Banerjee & Guiberson, 2012; Blatchley & Lau, 2010a; Klingner, Artiles, & Barletta,

2006). Given these points, evaluators must become proficient in evaluating and appropriately identifying linguistically diverse learners with disabilities.

Study Purpose

The purpose of this literature review is to provide a synthesis of the existing literature on the impact of the cultural competence of evaluators when diagnosing ELLs for special education. Cultural competence is defined as the integration and transformation of knowledge regarding individuals and groups of people into specific standards, policies, practices and attitudes used in appropriate cultural settings to increase the quality of services, thus producing better outcomes (Davis, 1997). Cultural competence includes knowledge of: (a) one's own culture and worldview; (b) one's biases and prejudice; (c) students' cultures and worldviews; and (d) the ability to understand the world through the lens of cultural diversity (McAllister & Irvine, 2000). Cultural competence is much more than a person's knowledge regarding diverse cultures; it is a process that evolves and changes over time (McAllister & Irvine, 2000). What follows is a synthesis of the literature examining issues related to the determining of special education eligibility for ELL students and culturally responsive assessment practices. Specifically, the current review of the literature aimed to:

1. Identify existing research related to the cultural competence of evaluation staff
2. Examine the role of evaluators' cultural competence in special education evaluation decisions regarding ELLs
3. Identify culturally relevant practices related to the assessment of ELLs

Method

Search Procedures

To address the aims of this review an electronic search using the EBSCOhost database, including Academic Search Complete, Education Research Complete, ERIC, Professional Development Collection, PsycARTICLES, PsycCRITIQUES, Psychology and Behavioral Sciences Collection, PsycINFO, and Social Sciences Abstracts, was conducted. Specific keywords utilized in searching for relevant reports were as follows: (*cultural and linguistically diverse learner* OR *ELL* OR *English language learner** OR *ESL*) AND (*evaluation* OR *identification* OR *assessment* OR *culturally competent assessments*) AND (*Language disab** OR *special education* OR *specific learning disab**) AND (*teacher self-efficacy* OR *evaluator self-efficacy* OR *self-efficacy*) AND (*culturally responsive teaching** OR *culturally responsive practices* OR *culturally competent teachers* OR *culturally competent evaluations*), This search resulted in the identification of 88 reports. Also, a hand search of the references of articles meeting the inclusion criteria was conducted, resulting in 21 additional reports.

Identification of Studies

A total of 109 studies were thus reviewed for inclusion. The articles included in this literature review consisted of journals articles, technical reports, or dissertations written in the English language. Abstracts and titles of articles were screened to determine if they met inclusion criteria. In cases where it was unclear whether criteria were met, the full text was read. Twenty-nine articles met the inclusion criteria and were coded for review.

To be included in this review, articles had to meet the following inclusion criteria:

1. The article focused on evaluator self-efficacy for assessing ELLs.
2. The article discussed key topics involving identification of ELLs as needing special education and special education evaluation staff's knowledge of cultural diversity.
3. The article examined best practices for evaluating culturally and linguistically diverse learners.

Articles were excluded if they did not report data or outcomes regarding culturally responsive practices in the evaluation process. Articles written in languages other than English or research not conducted in the United States were excluded from the literature review as our focus was on practice for U.S. schools. Articles were also excluded from the review if they solely addressed demographics of students in special education, provided characteristics of ELLs, or discussed misrepresentation of ELLs in special education without giving specific factors affecting the disproportionality of representation.

Articles that met the inclusion criteria were included and coded on whether and how they: (a) focused on evaluator self-efficacy; (b) discussed key topics involving the identification of ELLs as needing special education and special education staff's knowledge of cultural diversity; or c) examined best practices for evaluating CLD students. Table 1 contains a list of the articles reviewed and how they were included in the consideration of the literature.

Table 1

Topic Summary of Included Studies

Reference	Knowledge of Cultural Diversity in Evaluation Practices (n = 16)	Recommendations for Culturally Competent Evaluations (n = 14)	Study Conducted on Culturally Competent Evaluations (n = 1)
Bernal, et al. (2009)	X		
Blatchley & Lau (2010a)		X	
Calvin (2007)	X		
Chamberlain (2005)		X	
Fiedler et al., (2005)		X	
Figueroa & Newsom(2006)		X	
Gomez-Cerrillo & Olvera (2011)		X	

(table continues)

Table 1 (cont.)

Reference	Knowledge of Cultural Diversity in Evaluation Practices (<i>n</i> = 16)	Recommendations for Culturally Competent Evaluations (<i>n</i> = 14)	Study Conducted on Culturally Competent Evaluations (<i>n</i> = 1)
Guiberson (2009)		X	
*Hoover (2012)	X		
*Kaslow et al. (2007)	X	X	
Klingner & Harry (2006)	X	X	
Madison (2007)	X		
National Joint Committee of Learning Disabilities (2011)	X		
Ortiz (2008)	X	X	
Rhodes, Ochoa, & Ortiz (2005)	X		
Schroeder et al. (2013)	X	X	X
Shams-Avari (2005)		X	
Skiba (2002)	X	X	
Stephens et al. (2013)	X		
Sullivan (2010)		X	
Zetlan et al. (2011)	X		

Results

A total of 21 reports were identified examining culturally competent evaluation practices and meeting this study's inclusionary criteria. Unfortunately, none of these reports focused on evaluator self-efficacy. Yet, slightly more than half of the reports (*n* = 16) discussed key topics involving identification of ELLs and special education evaluation staff's knowledge of cultural diversity; and 48% (*n* = 14) examined best practices for evaluating culturally and linguistically

diverse learners. Although 14 articles gave recommendations on best practices for conducting culturally competent evaluations, only one empirical study was carried out on culturally competent assessments for special education (i.e., Schroeder, Plata, Fullwood, & Price, 2013).

Schroeder et al. (2013) examined the effectiveness of a training designed to at increasing evaluators' knowledge of CLD learners and cultural diversity as it pertains to evaluations. The training included nine online sessions related to CLD students' academic and social development at school. To assess the effectiveness of the training, 29 practitioners completed the Munroe Multicultural Attitude Scale Questionnaire (MASQUE; Munroe & Pearson, 2006) survey to determine their attitude toward and knowledge of cultural diversity at pre- and post-test. A Cohen's *d* effect size of 0.55, between pre- ($M = 89.67, SD = 12.92$) and post- test performance ($M = 95.99, SD = 9.61; t(28) = 2.26, p = .02$), was found suggesting the training had a moderate effect on evaluator's cultural competence (Schroeder et al., 2013).

Culturally Competent Evaluation Practices

This review found 14 articles reporting recommendations for best practices for conducting culturally competent evaluations of CLD learners (Blatchley & Lau, 2010a; Chamberlain, 2005; Fiedler et al. 2005; Figueroa & Newsome, 2006; Gomez-Cerrillo & Olvera, 2011; Guiberson, 2009; Kaslow et al. 2007; Klingner, et al., 2006; Klotz & Canter, 2006; Ortiz, 2008; Schroeder, et al., 2013; Shams-Avari, 2005; Skiba et al., 2002; Sullivan, 2010). The recommendations provided centered around four themes: 1) building cultural competence in evaluators, 2) identifying appropriate assessment tools, 3) second language acquisition and 4) how to interpret evaluation data. In this case, knowledge regarding themes two through four serve to address the first theme of developing culturally competent evaluators..

Building Cultural Competence

In addition to Schroeder et al. (2013)'s study examining a training module for evaluators, 16 other studies emphasized the importance of and provided guidance on approaches that might serve to build evaluators cultural competence (Bernal, Jiménez-Chafey & Domenech-Rodríguez, 2009; Calvin, 2007; Hoover, 2012; Kaslow et al., 2007; Klingner et al. 2006, Klingner & Harry, 2006; Lim, 2014; Lui et al., 2008; Madison, 2007; National Joint Committee of Learning Disabilities, 2011; Ortiz, 2008; Rhodes, Ochoa & Ortiz, 2005; Schroeder et al., 2013; Skiba, Knesting, & Bush, 2002; Stephens, Dykes, Proctor, Moon, Gardner & Pethick, 2013; Zetlin, Beltran, Salcido, Gonzalez & Reyes, 2011). The extensive coverage of this topic across this body of studies support Leigh (2001)'s position that cultural competence is crucial to conducting an objective assessment. Knowledge of or direct experiences with the values, attitudes, beliefs, and customs of a particular cultural group can be used as a guide and a framework for collecting and evaluating any and all assessment data (Leigh, 2001).

Recognizing Potential Areas of Bias

Since standardized assessments have innately high linguistic and content bias, evaluators with a strong sense of cultural competence can tease out factors in the assessment tools that may negatively impact an ELL's score (O'Bryon & Rogers, 2010; Ochoa et al., 1999; Ortiz, 2008). Also, these instruments often fail to include diverse groups in the normative samples. As a result, many of these assessment tools are inappropriate for use with CLD learners (Guiberson, 2009). Although assessment instruments are translated into languages other than English, evaluators must still be sensitive to cultural and linguistic diversity in evaluation procedures (Klingner &

Harry, 2006). Evaluation staff must embrace a culturally competent approach to evaluating students as possible recipients of special education (Skiba et al., 2002; Sullivan, 2010).

Ortiz (2008) and Sullivan (2010) make recommendations for conducting culturally competent nondiscriminatory assessments of ELL students for special education. Their recommendations include assessing and evaluating the learning ecology of the student. Evaluators must begin the evaluation with an exploration of external causes that might be impacting a student's ability to learn. Also, a hypothesis should be formed revolving around the learner's unique learning environment. The student's learning ecology should not be limited to the school setting. The home and community should be considered when conducting an objective and non-discriminatory assessment (Klotz, 2005; Ortiz, 2008; Sullivan, 2010). This includes considering not only the learners' cultural and linguistic background, but also their educational history as well (Klotz, 2005; Ortiz, 2008; Sullivan, 2010).

In other words, all relevant cultural and linguistic factors must be assessed. There are many factors apart from the educational setting that can significantly impact a student's ability to learn. It is necessary for evaluators to consider the external experiences of students as part of the evaluation (Ortiz, 2008; Sullivan, 2010). In general, culturally competent evaluations should always include data along with the context of the student's learning ecology (Klotz, 2006; Ortiz, 2008). All information collected during the assessment should be considered in an integrated manner. The meaning of data will depend mainly on the evaluator's understanding of the environmental influences that have occurred and have shaped the student's academic performance (Ortiz, 2008). Use of single data sources or the favoring of certain data or other information will lead to discriminatory outcomes (Ortiz, 2008).

Culturally competent evaluators must develop an understanding of non-discriminatory assessment practices to help reduce assessment bias. It is important for evaluators to be aware of the many ways assessments can be biased. Assessment professionals must make conscious decisions to become proficient at determining when a student's academic difficulties are attributable to second language learning stages or to disability (Blatchley & Lau, 2010; Chamberlain, 2005; Gomez-Cerillo & Olvera, 2011; Ortiz, 2008). Furthermore, evaluation practitioners must understand the provisions of IDEA regarding the assessment of ELL students. These regulations require: (a) assessments used be non-discriminatory in nature; (b) evaluation be in the student's native language; (c) multiple sources of data be used when determining the presence of a disability; (d) of valid assessment instruments be used; and (e) eligibility decisions for special education be made by a multi-disciplinary team (Chamberlain, 2005; Ortiz, 2008).

Developing Respect for Cultural Differences

Another essential component of a culturally responsive evaluation is respecting the cultural differences of students, families, and colleagues. Cultures differ on what constitutes desirable behavior and temperament. These norms may be substantially different from the standard of the mainstream population (Sullivan, 2010). Culturally competent evaluations require a knowledge of and value for cultural differences of students, including suspending judgments regarding deficits until all possible causal factors for the differences are ruled out (Sullivan, 2010).

Self-Efficacy

Furthermore, cultural competent evaluators must possess a strong sense of self-efficacy to

assist with appropriate evaluation of ELLs. Self-efficacy theory hypothesizes that self-perceptions of one's ability affects thoughts, feelings, motivation, and actions (Bandura, 1997; Chu, 2011; Lamorey & Wilcox, 2005). Based on this theory, evaluators who do not perceive themselves to have the knowledge and skills necessary to effectively evaluate ELLs would be less effective in carrying out culturally competent evaluations (Chui, 2011; Siwatu, 2011).

Though no studies have examined the role of evaluator's self-efficacy in the special education identification process, there has been work done examining the role self-efficacy in teachers. According to this research, educators form perceptions regarding the presumed reasons why students are struggling or succeeding in school based on their beliefs about their teaching efficacy as it relates to the designated content or population of students (Chu, 2011).

Specifically, teachers with negative perceptions about their skill or ability to impact change in students hinder the students' ability to learn (Chu, 2011). Teachers with a low sense of self-efficacy believe that they can only minimally affect student achievement. Teachers such as these are more likely to give up easily when confronted with difficult situations. They are less inventive and often feel that their students cannot learn due to external factors beyond the teacher's control, such as the student's home life or poverty (Paneque & Barbetta, 2006). With this in mind, teacher efficacy can impact a teacher's behaviors concerning choices made, exhausted effort, and perseverance under adverse conditions (Paneque & Barbetta, 2006). In a study conducted by Proctor (2001), it was reported that teachers were less likely to provide direct instruction for students for whom they had low expectations and placed fewer academic demands on those pupils. The result ultimately impacted the student's class performance, homework, and overall academic success (Chu, 2011).

Although much of the literature focuses on self-efficacy of teachers, the same principles may be applied to evaluation personnel. It can be assumed that an evaluator with a high sense of self-efficacy possesses the knowledge and skills to adequately evaluate and diagnose ELLs for special education (Bandura, 1997; Chu, 2011; Lamorey & Wilcox, 2005). Evaluation professionals with negative perceptions of students from other cultures may inappropriately identify an ELL as having a disability without taking into consideration factors that may impact the student's poor academic achievement. Likewise, an evaluator with a high sense of self-efficacy will make decisions regarding a student's eligibility for special education, taking into consideration all factors associated with the student's learning, language, and culture. The disconnect between an evaluator's knowledge of characteristics affecting second language acquisition and student backgrounds contributes to disproportionate representation of students from culturally different backgrounds in special education (Barbetta, 2006; Chu, 2011; Paneque & Barbetta, 2006; Siwatu, 2011). What follows is a discussion of the implications of these findings for future research and practice.

Discussion

Given the increasing number of ELLs in public schools, there is an ever-growing need for special education evaluation professionals to demonstrate high levels of cultural competence when evaluating these students. Additionally, these professionals will need knowledge of best practices for conducting evaluations, and a deep understanding of cultural diversity and its implications for student learning. The misidentification of ELLs as requiring special education is partly due to evaluators' lack of knowledge regarding second language acquisition (Klingner & Harry, 2006). At the federal level, several processes have been put in place to assist all involved

in making special education eligibility decisions for ELLs. The Individuals with Disabilities Education Improvement Act (IDEIA) of 2004 delineates additional requirements for the identification of ELLs in special education. Under this law, the assessment methods used for the purpose of evaluation must be valid and reliable and used for the purpose for which they were intended to be used. Moreover, evaluation staff must ensure the student's academic difficulties are not primarily the result of issues with hearing, vision, or motor abilities; intellectual disability; emotional disturbance; environmental, cultural, or economic disadvantage; limited English proficiency (LEP); or a lack of educational opportunity (IDEIA, 2004; Stephens, et al., 2013).

The use of culturally competent evaluation practices for identifying students for special education is crucial (Klotz and Canter, 2006; Schroeder, 2013). Evaluation professionals can contribute to the reduction of disproportionality and misidentification in special education by ensuring that their evaluation practices are sound. To this end, it is vital for assessment personnel to become experts in conducting culturally competent evaluations. Culturally competent assessments not only require that evaluators have knowledge about cultures different from their own, but also necessitate that evaluators possess a strong sense of self-efficacy as it relates to conducting evaluations for ELLs (Klotz and Canter, 2006; Schroeder, 2013).

Misidentification of ELLs as needing special education is believed to exist for several reasons, one of which is the evaluator's inability to make distinctions regarding when a student's underachievement is due to a disability and when it can be attributed to some other reason, such as a cultural disconnect in the classroom or issues related to second language acquisition (Artiles, Harry, Reschly & Chinn, 2002; Chamberlain, 2005). The ultimate goal of the evaluation team is to determine whether the characteristics considered to be those of a disability are not solely due

to issues related to culture or language (Klotz & Canter, 2006). When evaluation data are collected and interpreted using culturally responsive methods, there is an increased likelihood that fair, equitable decisions are made (Ortiz, 2008), resulting in fewer students being misidentified.

The key point is that the principles of teacher self-efficacy can be applied to evaluators. To be effective in their practice, evaluation professionals must aspire to high levels of self-efficacy. Assessment professionals with high levels of self-efficacy are more likely to conduct evaluations, taking into consideration all data regarding the student in order to make a correct determination of whether or not the student's academic difficulties are due primarily to a disability and not to a stage of language acquisition. Likewise, evaluators with a strong sense of self-efficacy regarding their assessment skills will use appropriate test batteries, consider informal as well as formal data, and are less likely to mistake cultural differences for a disability.

Study Limitations

The findings of this literature review are important given the high incidence of identification of ELL students with as having disabilities across the U.S. However, several limitations of this current literature review should be considered. Despite the use of multiple databases and key words, it is possible that relevant articles were missed in the electronic search based on the database and search terms employed. Another limitation was the number of studies identified examining evaluator self-efficacy. While several studies have been conducted on teacher self-efficacy and culturally responsive teaching as they relate to CLD students, only one study was found discussing evaluator self-efficacy in relation to the conducting of culturally competent evaluations. Also, although many articles were found discussing best practices for

conducting culturally competence evaluations, there has been little research focusing on the cultural competence of assessment staff involved in evaluating ELLs. Therefore, there are limitations in generalizing the findings of this literature review into the areas of evaluator self-efficacy and culturally competent evaluations.

Recommendations for Future Research

In the conducting of this extensive literature review, these authors identified many studies focused on culturally responsive teaching of minority children, as well as on the disproportionate representation of ELLs in special education. Yet, the majority of the articles identified in this review focused on recommendations for best practices for conducting evaluations rather than reporting empirical findings related to the topic. Only one study was identified focusing on appropriate training needed by evaluation staff to effectively discriminate between language difference and a disability (Schroeder et al., 2013). Based on the findings of this review, additional research, using a rigorous methodology is needed. Specifically, future research is needed to establish evidence based practice in approaches to preparing culturally competent evaluators, building evaluator self-efficacy as it relates to serving ELL and CLD populations, and procedures for conducting culturally competent evaluations.

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*Denotes studies included in review.

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CULTURALLY COMPETENT EVALUATIONS

Abstract

The current study examines the effectiveness of Project PEAC³E (Preparing Evaluators to Accurately Conduct Culturally Competent Evaluations), a reform-oriented professional development model, using case-based activities designed to increase evaluators' sense of self-efficacy, cultural competence, and the accuracy of evaluator eligibility decisions for English language learners (ELLs). Little research exists examining the role of evaluator's cultural competence in evaluating ELLs for special education. What does exist shows that many evaluators report low levels of self-efficacy as it relates to assessing ELLs. This study found that Project PEAC³E was effective in increasing evaluator self-efficacy. Implications of these findings for practice and future research are discussed.

Keywords: culturally and linguistically diverse learners, minority, teacher self-efficacy, special education, culturally relevant practices, English language learners

Introduction

Culturally and linguistically diverse (CLD) learners represent one of the fastest growing groups of school-aged students in the United States (Ruiz Soto, Ariel, Hooker & Batalova, 2015), rising 60% in the last decade and representing more than 400 languages, with approximately 80% speaking Spanish (Kena et al., 2016). According to the 2016 Condition of Education report, ELLs have consistently underperformed in reading when compared to their non-ELL 4th- and 8th-grade peers (Kena et al., 2016). This ongoing discrepancy in performance has been attributed to multiple factors related to the ethnic and linguistic differences of these students compared to the mainstream population (Collier & Thomas, 2009; Soto-Hinnman, 2010), and the lack of academic and instructional supports they are provided in school (Artiles,

Rueda, & Salazar, 2005). Cultural differences between students and teachers have been proposed as one of the primary reasons for the high number of referrals to special education, specifically due to differences in values, beliefs customs and traditions between our predominantly White teaching force and the ELL students they serve (Ford, 2012).

Educator Self-Efficacy

Teachers often report low levels of self-efficacy when educating ELLs (Chu, 2011). The construct of teacher self-efficacy stems from Bandura's theory of self-efficacy which hypothesizes that self-perceptions of one's ability affect thoughts, feelings, motivation, and actions (Bandura, 1997). Teacher efficacy is defined as an educator's belief that she is capable of organizing and performing specific tasks to successfully impact student academic performance (Paneque & Barbetta, 2006). Teachers with a high sense of self-efficacy have confidence in their teaching ability as to affect student learning and are open to trying new teaching techniques to meet the needs of their students (Chu, 2011; Paneque & Barbetta, 2006; Siwatu, 2011). In contrast teachers with a low sense of self-efficacy perceive themselves to have minimal impact on student achievement and often give up quickly (Bandura, 1997; Paneque & Barbetta, 2006).

Educators often lack the necessary training and background knowledge regarding second language acquisition to differentiate between a disability and a language difference (Butterfield & Read, 2011). Faced with ELL students experiencing academic struggles, these educators find themselves desperately searching for supports (Butterfield & Read, 2011), and at times, inappropriately turn to special education to solve this dilemma. Much like teachers, evaluators'

sense of self-efficacy and knowledge regarding second language learners can influence the accuracy of evaluation with ELLs (Blatchey & Lau, 2010).

Knowledge of language acquisition, cultural differences, assessment procedures, and eligibility criteria are critical for culturally competent evaluations to occur (O'Bryon & Rogers, 2010). Those evaluators who have not received sufficient training and support in developing this skill are less likely to feel efficacious in conducting an evaluation of this population.

Consequently, these evaluators are more inclined to evaluate and identify students for special education services using evaluation tools normed and designed for native English speakers and containing cultural and linguistic bias (Ortiz, 2008; O'Bryon & Rogers, 2010).

Culturally Competent Evaluations

Cultural competence is defined as “the ability of educators to successfully serve children and youth from all of the cultural backgrounds represented within the school population, and in particular, those students who are growing up in non-dominant cultural contexts” (Landa, 2011, p. 12). Cultural competence is crucial to conducting an appropriate nondiscriminatory assessment, and this competence in evaluation is believed to assist in reducing the number of ELLs misidentified as having a disability (Leigh, 2001). Cultural competence requires that evaluators have knowledge of other cultures and worldviews, as well as the ability to understand the world through diverse cultural lenses (Guiberson, 2009; Skiba, 2002). Evaluation staff must embrace a culturally competent approach to evaluating students for special education to achieve an unbiased placement decision (Skiba et al., 2008; Sullivan, 2010).

The goal of the evaluation team is to determine whether the student’s characteristics being deemed as a disability are not solely due to issues related to culture or language (Klotz &

Canter, 2006). For this reason, it is critical that assessment personnel become experts at discerning when a student's underachievement is due to another disability that can be attributed to some other reason, such as a cultural disconnect in the classroom or issues related to second language acquisition (Chamberlain, 2005). The assessment staff must consider how the roles of language, culture, and social history impact the student's academic or behavioral difficulties when interpreting the results of the student's evaluation (Blatchley & Lau, 2010; Klotz & Canter, 2006; Ortiz, 2008).

Culturally competent evaluators should recognize that there are many reasons why a student may be exhibiting learning difficulties. Intrinsic factors are only part of the reason students face academic problems in school, and nondiscriminatory evaluations should begin with assessment efforts exploring the external causes that might be related to a student's learning difficulties. Furthermore, the use of inappropriate assessment tools and procedures can result in these students being misidentified as having a disability when they are moving through the normal language development process (Collier & Thomas, 2009). Artiles et al., (2006) note that placement rates for ELLs in special education correlate with their levels of English proficiency, with those displaying lower levels of proficiency in English being more likely to be identified for special education services and placed in more restrictive environments. The long-term effects of inappropriately placing a student in special education can be debilitating (Artiles et al. 2005; Butterfield & Read, 2011; Codrington & Fairchild, 2012), as these students often fail to receive the same rigorous curriculum and may be ill-prepared for the demands of the next grade level. Additionally, they are less likely to graduate from high school than their peers without a disability diagnosis (Artiles et al. 2005).

Effective Professional Learning Using Case Studies

It is more crucial than ever for evaluators to participate in professional learning that is focused and geared toward culturally responsive evaluation practices. Presently, scant research has been conducted on how to conduct culturally competent evaluations; however, much of the research on teacher professional development may be extended to evaluators. Reform-oriented professional development, which includes collaborative activities (e.g., study groups, teacher networks, mentoring, and coaching) in addition to the use of case-based models is more effective at changing teacher behavior than traditional forms of professional development (Little, 1993; Lombardi, 2007). This type of training affords educators an opportunity to reflect on their practice by examining information that is specific to their area of expertise (Little, 1993; Lombardi, 2007). The research suggests that it takes approximately 20 hours of professional development for learning to be effective (Loucks-Horsley, Hewson, Love, & Stiles, 1998).

Effective evaluation practitioners must have a thorough understanding of the characteristics of the cultural group being evaluated, including gaining awareness regarding their own personal biases (Artiles et al. 2010). It is crucial for all practitioners to develop culturally responsive evaluation practices when evaluating CLD students for special education. Given the ongoing issues in appropriate identification, it appears imperative that we continue to enhance efforts in the identification, development, and implementation of evidence-based strategies for professional learning as it relates to evaluating ELLs.

Though there have been a number of studies addressing teacher self-efficacy in relation to teachers of CLD learners (Chu, 2011; Chu, 2014; Frye, 2010; Hibel et.al, 2010; Paneque & Barbetta, 2006; Siwatu, 2011), little research has examined evaluator sense of self-efficacy, cultural competence and its influence on the diagnosing of ELLs with disabilities. Only one

study has focused on culturally competent evaluations for special education (Schroeder et al., 2013), which suggested that training in issues related to multi-cultural evaluations results in an improvement in self-reported attitudes of evaluation professionals towards CLD students. A deeper understanding of the relationship between self-efficacy and cultural competence will provide valuable insights for evaluation practitioners on how to conduct culturally competent assessments of ELLs, and hopefully, lead to a reduction in the disproportionate representation of these students in special education.

Purpose

The purpose of the study is to train evaluation staff to use all of the relevant student data to determine whether academic difficulties are due to issues related to second language or disabilities and examine the role evaluators' multi-cultural awareness and sense of self-efficacy in culturally responsive practice influence evaluators' diagnosis decisions in cases studies involving ELLs. The information obtained will hopefully provide a model for culturally competent evaluations and assist in reducing the number of misidentified ELL students in special education. Further, this study will examine whether receiving training on culturally competent evaluations will affect the variables above. Specifically, the study will address the following research questions:

1. How does evaluators' reported levels of cultural competence and sense of self-efficacy relate to their ability to distinguish between language difference and learning disability as measured by case-based diagnosis determination?
2. What evaluator characteristics (e.g. cultural background, years of experience, type of licensure/certifications held) correlate with their sense of cultural competence and self-efficacy?
3. Does training in Project PEAC³E (Preparing Evaluators to Accurately Conduct Culturally Competent Evaluations) have a positive impact on the evaluator's sense of cultural competence and self-efficacy?

4. Does training in Project PEAC³E have a positive influence on the evaluator's ability to distinguish between language difference and learning disability as measured by the case-based diagnosis determinations?
5. Are the characteristics of evaluators (e.g., cultural background, years of experience, type of licensure/certifications held) predictive of accuracy of eligibility decisions?

Methods

Participants

A large suburban school district sought to provide training for their evaluation staff on culturally competent evaluation practices. A total of 40 evaluators participated in the training. These individuals received six hours of professional learning focusing on best practices for evaluating ELLs. Of the training participants, only 50% ($n = 20$) were retained for the final sample. Five evaluators chose not to participate in the survey, and another 15 did not complete all the components of the study.

To compare these individuals' outcomes to other comparable assessment personnel in the state, two additional suburban school districts were recruited to serve as the comparison group. A convenience sample of 40 evaluators (treatment $n = 20$ and control ($n = 20$) were included in the final analysis. These professionals included 34 diagnosticians, 4 LSSPs, and 2 SLPs. Sixty-three percent of the study participants had more than ten years of experience in evaluating students for special education. Eighty-three percent of the participants identified themselves as White. Also, 95% of those in the sample hold a master's degree, while another 2.5% have a doctorate.

Procedure

Before participating in the training, participants were asked to complete a version of the Culturally Responsive Teacher Self-Efficacy (CRTSE) modified to include demographic questions and align with evaluator activities, along with the Munroe Multicultural Attitude Scale Questionnaire (MASQUE) as a pretest. The CRTSE measures an individual's belief in one's abilities to perform practices associated with culturally responsive teaching (Siwatu, 2011). This survey was created for pre-service teachers and was developed based on Bandura's (1977) self-efficacy theory. The CRTSE is a 40-item Likert scale survey, and its purpose is to rate how confident participants are in their capability to work with CLD students. The internal reliability of scores from this instrument has been reported to be .96 (Siwatu, 2011).

The MASQUE is an 18-item self-report survey using a 6-point Likert scale, ranging from 1 (*strongly disagree*) to 6 (*strongly agree*), and is designed to measure the multicultural attitudes of an individual. The items on the MASQUE test are divided into three subscales: know, care, and act (Munroe & Pearson, 2006). Higher scores on the MASQUE indicate one's attitudes towards multiculturalism are more positive (Munroe & Pearson, 2006). The authors of this measure reported an internal consistency of .80 for this measure. Although the initial data were based on a small sample, a Cronbach's alpha internal reliability of .72 was reported and deemed adequate (Munroe & Pearson, 2006).

In addition to the surveys, the treatment group was provided with a case study (Case Study 1) of a prospective special education student. The case study offered the information necessary to make an eligibility determination, including the student developmental history, language scores, socio-cultural information, educational history, cognitive scores, achievement scores, and other educational data. A panel of five experts experienced in evaluating ELL

students for special education assisted in reviewing the initial draft of the content of the survey and the layout. Across the three cases, it was determined that in one of the cases an affirmative eligibility determination should be made. Evaluators were asked to decide whether the student met the criteria for special education.

Intervention

Upon completion of the pre-test survey and case study 1, the treatment group participated in Project PEAC³E training. This six-hour training focused on the required components of culturally competent evaluations. Also, a case-based instructional model was used to support engagement and application of concepts presented. The intent of this training was to assist participants in understanding the importance of reviewing all relevant educational data before making determinations of eligibility for the purpose of ruling out the exclusionary factors as the primary cause of the student's academic difficulties.

The Project PEAC³E training was designed based on best practices for conducting professional learning using case-based studies and focused on best practices for conducting special education evaluations for ELLs (Cohen & Hill, 2000; Desimone, 2011; Loucks-Horsley et al., 1998). A case-study on a struggling ELL was provided to the participants. Throughout the course of the training, the participants were afforded the opportunity to collaborate with one another and with the presenter regarding different components of the case study. Participants read through the case study and discussed possible variables affecting the student's learning.

As the participants learned more about the student in the case, the researcher discussed key components associated with second language acquisition, issues related to the misidentification of ELLs in special education, how to evaluate students who speak other

languages, as well as how to review educational, ecological and evaluation data effectively to appropriately identify ELL students for special education. The ultimate goal of the current study was to determine whether or not evaluation staff acquired a deeper understanding of the influence of second language acquisition on the academic achievement of ELL students following the Project PEAC³E training. To identify outcomes associated with the training, other key tools were used to assess learner outcomes.

Following training, the modified CRTSE and MASQUE surveys were re-administered as a post-test. Also, documentation from the pretest case (Case Studies 1), and two additional cases (Case study 2 and 3) were provided, and participants asked to make an eligibility decision for each. The intent of providing Case Study 1 both pre- and post-test was to determine whether evaluators' decisions regarding student eligibility changed once training was provided, while cases two and three allowed for additional opportunities for the participants to demonstrate their acquisition of the skill taught in the PEAC³E training.

Control Group

Evaluators from two additional districts were invited via email to participate in the survey during the same week as the Project PEAC³E training. Participants were asked to complete the modified version of the CRTSE and the MASQUE, and make an eligibility decision for Case Studies 1, 2 and 3. Surveys were held open for one month. To ensure similar backgrounds between treatment and comparison groups, a matched samples analysis was performed. Potential comparison group participants were individually matched with treatment group participants using the following background characteristics: evaluator role (e.g. diagnostician), years' experience as an evaluator, fluency in a language other than English, and highest degree earned.

Results

Survey Results

Treatment group participants were administered the Appraisal and Expectancy subscales of the CRTSE modified for evaluators and the MASQUE, both before and after receiving training on the use of culturally responsive evaluation methods. The modified CRTSE was used to assess evaluator self-efficacy. Scores obtained with the modified CRTSE demonstrated excellent internal consistency reliability, measured as Cronbach's alpha (Cronbach, 1955). Alphas ranged from .90 on the Appraisal subscale for the treatment group before training to .97 on the Appraisal subscale for the control group. These values are consistent with alpha estimates of .96 obtained by Siwatu (2011) for the original CRTSE instrument and provide evidence for the strong internal consistency reliability of the modified version of CRTSE. The MASQUE (Munroe & Pearson, 2006), used to measure attitudes toward cultural diversity, produced a score reliability ranging from .90 on the pre-treatment administration for the treatment group to .79 on the post-treatment administration, a decrease of .11 between pre- and post-test. These values are considerably greater than the alpha estimate of .72 determined by Munroe and Pearson (2006).

Total scores on the pre-treatment administration of the CRTSE and MASQUE appeared to be slightly higher in the comparison group than the treatment group. For example, mean total score on the Appraisal subscale of the CRTSE was 189.32 for the treatment group and 198.65 for the comparison group. MASQUE pre-treatment scores were slightly greater for the control group ($M = 108.39$) than the treatment group ($M = 103.63$). Mean post-treatment scores for the CRTSE were greater than pre-treatment scores for both the Appraisal and Expectancy subscales; however, pre/post scores for the MASQUE do not appear to differ considerably.

Pre- and post-treatment scores on the modified CRTSE and MASQUE were compared using paired-samples *t*-tests. Pre-training scores for the treatment group ($M = 407.79$, $SD = 38.76$) were not significantly different $t(38) = 1.15$, $p = .26$, $d = 0.36$) than those for the comparison group ($M = 422.85$, $SD = 43.69$), suggesting that despite a slightly lower mean score on the measure of cultural responsive self-efficacy the treatment group did not have unusually low scores on the CRTSE prior to training. Mean total scores on the CRTSE for the treatment group before training ($M = 407.79$, $SD = 38.76$) and after training ($M = 442.69$, $SD = 40.15$) were significantly different, $t(19) = 4.36$, $p < .001$, $d = 0.88$. These results suggest that the training was related to a large and positive impact on the overall self-efficacy scores of the treatment group.

Also using a paired-samples *t*-test, the mean total scores on the MASQUE for the treatment group before training ($M = 103.63$, $SD = 11.99$) and after training ($M = 105.60$, $SD = 10.25$) were not significantly different, $t(19) = 1.10$, $p = .29$, $d = 0.18$. Pre-training scores for the treatment group were not significantly different, $t(38) = 0.79$, $p = .44$, $d = 0.25$, than those for the comparison group ($M = 108.39$, $SD = 12.05$), suggesting that the treatment group had typical scores on the MASQUE prior to training. These results suggest that the training did not result in a detectable increase in scores related to the multicultural attitudes of the treatment group. Five items on the MASQUE were analyzed to investigate how the participants answered the questions. These items were chosen because they are more aligned with cultural competence. There was not a significant difference between the treatment pretest ($M = 28.75$, $SD = 4.61$) and the comparison group ($M = 30.44$, $SD = 4.28$).

Case Study Results

Treatment group participants were provided case study documentation and asked to make a determination as to whether evidence suggested that the child qualifies for special education services. Case Study 1 was evaluated both before and after training; Case Studies 2 and three were only evaluated after training. Comparison group participants made qualification decisions in all three case studies. Case Studies 1 and 2 provided evidence that the child evaluated did not meet criteria for special education services and one of the three “Unlikely to Qualify” responses was considered to be a correct determination. An accurate determination for Case Study 3 was deemed to be any response that the child was “Likely to Qualify.”

Based on responses of both the comparison and treatment groups, most evaluators were able to correctly determine that the child in Case Study 1 was unlikely to qualify, with percentages of correct determinations ranging from 80% for the pre-treatment case to 95% for both the post-treatment and control group cases. There was a 15-percentage point increase in the accuracy of placement determinations between pre- and post-treatment evaluation of Case Study 1. This apparent increase in accuracy was based on three additional participants making a correct evaluation decision in the post-test as compared to the pre-test. Evaluation of the z-ratio indicated that this increase was not significant, $z = 1.42, p = .153$. On the other hand, results from Case Study 2 indicated that only 40% of control group respondents chose the correct determination that the child does not qualify, while 65% of the treatment group made the right determination following the PEAC³E training. Using a z-ratio it was determined that there was not a significant difference in accuracy of placement determinations between treatment (65% accuracy) and comparison (40% accuracy) group evaluators for Case Study 2. Despite a higher percentage of treatment group evaluators making the accurate decision, treatment (65%

accuracy) and comparison (40% accuracy), this difference was not found to be statistically significant ($z = 1.58, p = .11$). For Case Study 3, 75% of the control group made the correct determination that the student did qualify for special education, compared to 70% of the treatment group. The difference between the control and treatment group's responses were not statistically significant (this difference was not found to be statistically significant ($z = .35, p = .72$)).

Evaluator placement decisions were evaluated to determine if they could be predicted from CRTSE and MASQUE scores. For Case Study 1, the results of the analysis suggested that modified version of the CRTSE and MASQUE scores did not appear to be predictive of a correct eligibility. For Case Studies 2 and 3, similar analyses were performed on post-training classifications by the treatment group participants only. In no case did the models including CRTSE and MASQUE significantly improve prediction of eligibility decisions.

This study also sought to better understand the relationship between evaluator characteristics and their reported levels of self-efficacy and cultural competence. This question was addressed by regressing CRTSE and MASQUE scores from comparison and pre-treatment group on participants' current evaluator role, the number of years of experience as an evaluator, fluency in a language other than English, race/ethnicity, and gender in a multiple linear regression model. Bivariate correlations between all predictor and outcome variables did not suggest that a relationship exists between evaluator characteristics and self-efficacy or cultural competence. Among the predictor variables, significant correlations were only detected between gender and evaluator role, $r = .327, p = .02$, and gender and fluency, $p = -.504, p < .01$. As might be expected, several correlations between self-efficacy and cultural competence measures were significant. Scores on the Appraisal component of the modified CRTSE were positively and

significantly correlated with both the Expectancy component, $r = .356, p = .01$, and the MASQUE total score, $r = .425, p < .01$. Also, the MASQUE was significantly correlated with the total score on the modified CRTSE, $r = .382, p < .05$, but the correlation between MASQUE and the Expectancy component of the modified CRTSE was not significant, $r = .163$.

When examining the relationship between evaluator characteristics and evaluator self-efficacy and multicultural awareness, a series of multiple regression analyses was performed on pre-treatment CRTSE and MASQUE self-appraisal scores using evaluator role, years of experience, fluency in a language other than English, race/ethnicity, and gender as predictors. None of the regression models significantly predicted self-reported modified CRTSE or MASQUE scores. This finding suggests that, for the sample included in this study, evaluator characteristics do not significantly predict scores on the CRTSE or the MASQUE.

To better understand the relationship exists between evaluator characteristics and eligibility decisions, an ordinal regression was performed using evaluator case study decisions as the dependent variable and evaluator role, experience as an evaluator (1 = *less than five years*, 2 = *five to ten years*, 3 = *more than ten years*); and fluency (0 = *not fluent*, 1 = *fluent in a language other than English*) as categorical or ordinal predictors. To increase sample size, results for treatment (pre-treatment) and control groups were combined for Case Study 1. For Case Studies 2 and 3, only the post-treatment data were evaluated. Results suggest that evaluator role, experience, and fluency in languages other than English were not predictive of ratings on the six-point scale for any of the three case studies. Inclusion of role, experience and fluency did not provide a significant improvement in predictive ability of the model.

The potential relationship between evaluator characteristics and accuracy of case study determinations were also evaluated for each of the three case studies and evaluator

characteristics. Respondent ratings on the six-point scale were dichotomized to reflect whether the evaluator made a correct or incorrect placement decision based on the case study documentation provided. These correct/incorrect responses were then classified according to the participant's background characteristics (i.e. role, years of experience as an evaluator, and fluency in a language other than English). In none of the cases was a significant relationship found to exist between evaluator characteristic and accuracy of case study determinations.

Discussion

Given the number of ELLs being served in schools and the longstanding patterns of misidentification of these learners and their learning difficulties, the current study helped to better understand the role of evaluators' self-efficacy and cultural competence in diagnosis decisions, as well as examine the impact of a language and cultural sensitive evaluation training program (i.e., PEAC³E) on these variables. Specifically, this study investigated the potential relationship between participation in PEAC³E, evaluator background, and levels of self-efficacy and cultural competence among special education evaluators and how these factors influence the eligibility decisions made by these practitioners. A summary of the findings of this study, as well as implications for the field, are provided below.

Summary of Findings

The findings from this review indicate that participation in Project PEAC³E training was related to increased scores on evaluators' reported self-efficacy based on the modified CRTSE, and add support for the effectiveness of case-based models of professional development. However, similar results were not obtained for multi-cultural attitudes, as measured by the MASQUE, for which there was not a significant increase in mean scores for the post-treatment

administration. This suggests that multicultural attitudes may not be improved or changed through the effects of the Project PEAC³E training. Thus, cultural attitudes may be an enduring state-trait that reflects patterned thinking over long periods of time and requires more prolonged exposure to impact change (Kolano & King, 2015). Evaluator self-efficacy may be more malleable and sensitive to new learning related to evaluating culturally diverse student populations.

It should be noted that the post-treatment internal consistency reliability of the MASQUE was relatively small, only .79, and it is well known that low reliability serves to attenuate effect sizes, which makes it harder to obtain a statistically significant result (Thompson, 2010). Also, the MASQUE contains several reverse-worded items, a characteristic known to negatively influence instrument reliability (Weijters & Baumgartner, 2012). Thus, interpretation of MASQUE results should be tempered with the recognition of the low reliability of the instrument, along with the relatively small sample sizes ($n = 20$ for treatment group; $n = 20$ for the comparison group) in this study.

As an incidental result, a strong the internal consistency reliability (Cronbach's alpha) of the scores for the CRTSE items modified for use in this study with evaluators (rather than teachers) was found, with an estimated alpha of .95 for all 50 items included in the instrument. This finding suggests that others planning investigations into the self-efficacy beliefs of special education evaluators may wish to use the instrument in its modified form in future studies.

For the sample in the current study, self-efficacy belief and cultural competence do not appear to be related to evaluator background. Further, none of the background, self-efficacy, or cultural competence, measures demonstrated a relationship with evaluator ability to correctly

classify case studies describing students with learning deficits related to linguistic or true learning disabilities.

Study Limitations

The purpose of this study was to provide information regarding evaluator self-efficacy for conducting culturally competent evaluations. While the study provides valuable information regarding evaluator knowledge, there are several limitations to this research. First, the convenience sample employed and the manner in which the survey was distributed. Surveys were sent via email to participants. While efforts were made to obtain a broad range of evaluator representation in the field, some evaluators did not choose to participate in the survey. Indeed, only half of the potential treatment group participants receiving Project PEAC³E training completed all pre and post-treatment components of the survey, and only one-third of the potential comparison group participants responded adequately to the survey request. Thus, the survey results include inherent response bias toward those evaluators willing to participate or those having strong opinions about the content of the study. It is unknown as to how the inclusion of all special education evaluators in the treatment and control districts may have influenced the outcomes of the study. Therefore, results of the questionnaire may not reflect the beliefs of the evaluators of special education as a whole, and caution should be exercised if generalizations to the larger population of evaluators are considered.

Another limitation that introduces potential bias into the results is the extensive length of the survey and case studies activities. Control group respondents were required to provide background information, respond to 50 items on the modified version of the CRTSE and 18 items on the MASQUE, and then review sets of documents for three different case study

determinations. The treatment group participants were required to provide an additional set of responses for the modified CRTSE and MASQUE as the post-treatment evaluation. Given the length of the survey, it is possible that respondents did not take the time to answer questions honestly, and made attempts to finish quickly, thereby adding additional error to instrument scores and inaccurate decisions on case studies.

Insufficient sample sizes, due to attrition may have resulted in the lack of adequate power to detect effects. For example, use of multiple regression with five predictor variables of evaluator characteristics (role, years' experience, etc.) with a sample size of $n = 40$ and an alpha probability of .05, has a power of only 0.33 to detect a small effect size of $R^2 = .12$ (Faul, et al., 2007). Future examinations of these variables with a larger sample might prove more informative.

Also, during the online administration of the modified CRTSE to treatment and control groups, two items were inadvertently omitted from the instrument for some participants. Thus, these items were removed from the analysis, leaving 50 total CRTSE items. The excluded items included (1) I am able to obtain appropriate evaluation tools for evaluating students, and (36) Revising instructional material to include a better representation of the students' cultural group will foster positive self-images. Each item was rated on a 0 to 10 on a Likert-type scale.

Furthermore, although best practices for professional learning suggest that effective training requires at least 20 hours, the six hours of training provided may not have been sufficient to impact measurable changes in attitudes toward cultural competence and use of effective culturally-sensitive practices in evaluation placement. Additional training and on-the-job practice may be required to further enhance skills and thought processes necessary to exact change in approaches to special education evaluation.

At the time of this study, the researcher was employed by District 1 and served as a supervisor for several of the evaluators. This prior relationship possibly influenced the level of knowledge of culturally sensitive practices of those evaluators participating in the survey. Further, before this study, the treatment group district, as well as comparison group participants from District 2, did not have training on ELLs in the prior three years. However, comparison group participants from District 1 participated in at least 4 hours of professional learning provided by the researcher specific to evaluating second language learners. Finally, differences in the demographic makeup of the treatment and control groups may have also influenced the results of the survey. There is a greater proportion of ELL students in the treatment group district (26.4%) and the control group from District 1 (18.5%), as compared to the percentage in control group District 2 (8.5%). Such a difference in student demographics between districts may influence survey results, as those participants with higher proportions of ELL students likely have more experience in evaluating ELLs than those in districts with fewer ELL students.

Conclusion

English learners represent one of the fastest growing groups of school-aged students in the United States (Artiles et. al, 2010; Ford, 2012; Skiba et. al, 2008; Zhang & Katsiyannis, 2002) and represents more than 400 languages, with approximately 80% speaking Spanish (U.S. Department of Education, 2016). Disproportionate representation of ELLs in special education has been a major concern for nearly 40 years and, unfortunately, continues to plague our educational system today. Ethnicity and race are significant predictors of placement in special education programs (Butterfield & Read, 2011; Skiba et. al, 2002). School district evaluation staff often struggle not only with finding appropriate tools normed and designed for use with

ELLs. Also, these professional also lack the necessary training and knowledge needed to discern between actual learning disability and a language difference (Butterfield & Read, 2011), resulting in a disproportionate representation of ELLs in special education.

A deeper understanding of the relationship between self-efficacy and cultural competence will provide valuable insights for evaluation practitioners on how to conduct culturally competent assessments of ELLs, to reduce the disproportionate representation of these students in special education. Professional learning emphasizing cultural sensitivity should occur consistently and on an ongoing basis to increase the cultural competence of evaluation staff. However, this type of systemic change takes time. For significant change to occur regarding evaluator cultural competence and increase self-efficacy with evaluations of ELLs, school districts and university programs alike must focus their efforts on ensuring that their staff are culturally competent.

Given that there has only been one other study such as this one in the past three years, the findings from this research study offers some encouraging news. Use of the adapted CRTSE for evaluation professionals could assist school districts with assessing evaluator cultural competence and self-efficacy of their evaluation staff. The results of such a survey could substantiate the need for training in culturally competent practices. Training such as Project PEAC³E provides a framework for school districts and evaluators to use when evaluating ELLs.

Furthermore, implementation of evidence-based professional development focused on case-based studies and active audience participation, such as Project PEAC³E, appear to have promise in improving evaluator's self-efficacy in evaluating and determine the eligibility of ELLs for special education. One of the greatest challenges, however, is time. Evaluators, like teachers, not only need professional development focusing on culturally competent evaluations

but also need the necessary timeframe to participate in such training in a way that is not only useful but meaningful to their practice.

Implementation of evidence-based professional development such as Project PEAC³E focused on case-based studies and active participation appears to have promise in improving evaluator self-efficacy in evaluating and determining the eligibility of ELLs for special education. This type of training, used in conjunction with the modified version of the CRTSE could improve the cultural competence of evaluators over time. Use of this kind of training module can be extended from evaluation staff to teachers in an attempt to assist teachers in discerning the difference between cultural and linguistic differences and truly disabilities. It is hoped that this study will have the long-term effect of decreasing the number of ELL students inappropriately referred, evaluated and placed in special education.

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APPENDIX A

CULTURALLY COMPETENT EVALUATION EXTENDED LITERATURE REVIEW

Introduction

Culturally and/or Linguistically Diverse (CLD) learners represent one of the fastest growing groups of school-aged students in the United States (Ruiz Soto, Ariel, Hooker & Batalova, 2015), growing 60% in the last decade. This is significant when considering that the general school population only grew by 7% in the same time period (Grantmakers for Education, 2013). This diverse group includes students representing more than 400 languages, with approximately 80% speaking Spanish (Kena et al., 2016). In 2016, the U.S. Department of Education disseminated its annual report titled *The Condition of Education*. According to this report, public schools are more racially, ethnically, and linguistically diverse than ever before, and this demographic shift is expected to continue (Kena et al., 2016). Furthermore, this report revealed statistics on the educational achievement of ELLs. For all available assessment years, the average reading scores for non-ELL 4th- and 8th-grade students were higher than the scores of their ELL peers. In 2015, the achievement gap between non-ELL and ELL students was 37 points at the 4th-grade level and 45 points at the 8th-grade level; these gaps were not measurably different from the achievement gaps observed in 2013 and 1998 (Kena et al., 2016).

In general, the term ELL refers to students who may differ from the mainstream society due to differences in ethnicity and language (Collier & Thomas, 2009; Perez, 1998; Soto-Hinnman, 2010). Research suggests ethnicity and race are significant predictors of placement in special education programs (Butterfield & Read, 2011; Skiba, Knesting, & Bush, 2002). School districts evaluate and identify students for special education services using evaluation tools normed and designed for native English speakers, and, many of these assessment tools contain racial and ethnic bias (O'Bryon & Rogers, 2010). The lack of adequate academic instructional accommodations and supports for ELLs exacerbates the likelihood that these students will

display educational difficulties and find themselves referred for special education services (Artiles et. al 2006; Butterfield & Read, 2011; Skiba et al.2002). Further, general and special educators often lack the necessary training and background knowledge regarding second language acquisition to know how to differentiate between an actual learning disability and a language difference (Butterfield & Read, 2011). Consequently, many educators may find themselves desperately searching for supports to meet the needs of this struggling population of students (Butterfield & Read, 2011), at times, inappropriately turning to special education to provide these supports.

The disproportionate representation of ELLs in special education has been extensively documented for over 40 years (Artiles, Harry, Reschly, & Chinn, 2002; Artiles, Kozleski, Trent, Osher, & Ortiz, 2010; Ford, 2012; Skiba et al. 2008; Zhang, Katsiyannis, & Roberts, 2014). The growing number of students from diverse backgrounds exhibiting low academic performance has significantly contributed to this phenomenon (Samson & Lesaux, 2009). Many ELLs have difficulty achieving grade-level standards, as a result they are often referred to special education (Artiles et. al 2006; Butterfield & Read, 2011; Collier & Thomas, 2009; Gay, 2010). The long-term effects of placing a student in special education can be debilitating (Artiles et al. 2005; Butterfield & Read, 2011; Codrington & Fairchild, 2012). Misidentification of ELLs in special education is a problem, because it often leads to inappropriate identification for special education services and supports and also negatively impacts cultural groups, by perpetuating stereotypes regarding certain cultures (Chamberlain, 2005). Consequently, these students may fail to receive the same rigorous curriculum available to students without disabilities, and may be ill-prepared for the demands of the next grade level as a result of lowered classroom expectations.

Additionally, they are less likely to graduate from high school than their peers without disabilities (Artiles et al. 2005).

Although the number of ELL students across the U.S. has grown significantly over the past decade, the demographics of the teaching population has remained constant (Ford, 2012). Cultural differences between learners and teachers also contribute to the high number of referrals for special education (Artiles et. al 2006; Butterfield & Read, 2011; Collier & Thomas, 2009; Ford, 2012; Gay, 2010). The result is an overrepresentation of ELLs in special education (Artiles et al. 2002; Artiles et al. 2010; Ford, 2012; Skiba et al. 2008; Zhang, D., Katsiyannis, Ju, & Roberts, 2014). Several factors are associated with the high rates of referral and placement in special education for ELL students including changing demographics, the similarity of issues related to language acquisition and educational disability, cultural differences, and evaluator self-efficacy.

Disproportionality

Three types of disproportionality occur in special education. The first is overrepresentation, and it occurs when the percentage of a particular student demographic group in special education is greater than the school population as a whole. The second type is underrepresentation. This form occurs when students with disabilities are not identified and do not receive the necessary supports and services needed to access the educational environment appropriately. Lastly, misidentification of ELLs also occurs when students without disabilities are identified as having a disability that they do not truly have (Guiberson, 2009).

As a result of changes in demographics, students of many cultures are sitting in American classrooms. Historically, as well as currently, CLD student have been marginalized and

experience inequitable school practices (Artiles et al. 2005; Ford, 2012; Terry & Irving, 2010). Further, ELLs often face additional challenges, such as limited schooling, inability to read and write in the native language, high mobility rate resulting in limited instruction, and emotional needs related to cultural differences (Fletcher & Navarrete, 2003; Ortiz & Yates, 2003). As a consequence of these challenges, ELLs have one of the highest grade retention and dropout rates of all student groups (Allensworth, 2015).

In addition to, or possibly because of the issues above, ELLs are often over referred to special education. (Artiles et al. 2005; Butterfield & Read, 2011). The disproportionate representation of minority students tends to occur at a much higher rate in disability categories that are considered “soft” or subjective. These categories include intellectual disability (ID), emotional disturbance (ED), and learning disability (LD). The subjective nature of these types of eligible is influenced significantly by the teacher’s judgment as well as contextual factors (Donovan & Cross, 2002).

English learners are possibly misidentified in the elementary grades due to the variety of supplementary supports and services offered at that level (e.g., targeted reading interventions, math interventions, Bilingual/ESL services). However, at the secondary level, the increase language demands of the content, along with a decrease in supports and services offered may result in a higher referral to and representation of ELLs in special education at the secondary level (Artiles et al. 2005; Guiberson, 2009). Contrary to the numerous studies identifying over-identification as a significant factor in the disproportionality of CLDs in special education, Morgan et. al, (2015) found that CLD children were less likely than White, English speaking children to be identified as having a disability, and that minority students were underrepresented in special education throughout the elementary and middle school years. However, Artiles et al.

(2006) revealed that ELLs were underrepresented in special education in grades K-5 and were overrepresented in grades 6-12. Furthermore, placement rates for ELLs in special education correlated with students' level of English proficiency. Students with higher levels of English proficiency were less likely to be identified for special education than their less proficient English language peers (Artiles et al. 2005). Also, there was a higher tendency for students with lower English proficiency levels to be placed in more restrictive settings in special education (Artiles et al. 2005). Regardless of whether ELLs are under-identified, over-identified or mis-identified for special education services, the most important point to consider is whether or not these students are accurately placed and receiving appropriate supports (Donovan & Cross, 2002).

Characteristics of English Language Learners

Difficulties associated with students with specific learning disabilities (SLD) are also commonly observed in ELLs or by students adjusting to a new culture. These issues include: (a) poor academic achievement, (b) behavioral concerns, (c) issues related to language acquisition, (d) socio-emotional difficulties, (e) difficulties with written language, (f) poor attention, and (g) inability to understand or follow directions (Artiles et al. 2005; Arzubaga, Artiles, King, & Harris-Murri, 2008; Becker, 2012; Banerjee & Luckner, 2013; Collier & Thomas, 2009), all of which can influence special education assessments of ELLs. The development of second language acquisition takes time. While these factors might appear to be valid reasons for a referral to special education, some of these issues may be by-products of language acquisition. Issues typically faced by ELLs when acquiring a second language cause serious misunderstandings regarding educational needs (Becker, 2012; Banerjee & Luckner, 2013).

Distinguishing between the common characteristics of second language acquisition and moderating effects of learning disabilities can be quite confusing for many educators. It takes approximately five to seven years for an ELL to develop Cognitive Academic Language Proficiency (CALP). CALP refers to formal academic learning, which includes listening, speaking, reading, and writing. This level of language proficiency is necessary for students to succeed in school (Cummins, 1983; Collier & Thomas, 2009). Teachers often confuse the effects of learning a new language with factors associated with disabilities and thus refers the student for a special education evaluation. Just as it is confusing for teachers to discern language differences from learning disabilities, evaluation practitioners often struggle when making the same decisions for ELLs disability determinations (Artiles et al. 2005; Arzubiaga et al. 2008; Becker, 2012; Banerjee & Luckner, 2013; Collier & Thomas, 2009; Stein, 2011).

Cultural Differences

Teacher perceptions of CLD students have a significant impact on the expectations placed on the academic performance of minority children (Rhodes et al., 2005). There is an apparent disconnect between CLD students and the school systems that serve them, resulting in an achievement gap and the disproportionate representation of the ELL students in special education (Ford, 2012). Cultural differences between students and teachers have been proposed as one of the primary reasons for the high number of referrals to special education, specifically due to differences in values, beliefs customs and traditions between White teachers and the ELL students they teach (Ford, 2012). Teachers from cultural backgrounds different than their pupils often have low expectations and experience cultural misunderstandings of ELL students (Siwatu, 2011). These low expectations, paired with the limited preparation many teachers have received

in effective instruction of ELL students who are at risk of having, or are with disabilities (Kea et al. 2006), can result in increased special education referral rates (Ford, 2012; Siwatu, 2011).

Educators form perceptions, albeit sometimes incorrect, regarding the reasons why students are struggling or succeeding in school based on their cultural and self-efficacy beliefs. Teachers with negative attitudes about their students impact the learner's ability to learn (Chu, 2011; Paneque & Barbeta, 2006; Siwatu, 2011). Further, teachers with a weak sense of self-efficacy believe that they can only minimally affect their students' achievements. Teachers with negative attitudes and/or low levels of self-efficacy, as it relates to CLD students or struggling learners, are more likely to give up easily when confronted with difficult situations (Chu, 2011; Paneque & Barbeta, 2006; Siwatu, 2011). They are less inventive and often feel that their students cannot learn due to external factors beyond their control, such as the student's home life or poverty (Chu, 2011; Paneque & Barbeta, 2006; Siwatu, 2011).

Research has shown that teachers with a positive sense of self-efficacy have confidence they can significantly impact student learning (Chu, 2011; Paneque & Barbeta, 2006; Siwatu, 2011). Many positive outcomes have been linked to teachers with a high sense of efficacy. For example, student achievement, student motivation, the ability to implement effective classroom management strategies, and capacity to work for longer periods of time with students who are struggling academically have all been positively correlated to teachers' sense of self-efficacy (Chu, 2011; Paneque & Barbeta, 2006; Siwatu, 2011).

Evaluator Self-Efficacy

As with instruction, self-efficacy is an essential component of appropriate diagnosis of ELLs for special education (Paneque & Barbeta, 2006). The construct of teacher self-efficacy

stems from Bandura's theory of self-efficacy which hypothesizes that self-perceptions of one's ability affect thoughts, feelings, motivation, and actions (Bandura, 1997). Teacher efficacy is defined as an educator's belief that she is capable of organizing and performing specific tasks to successfully impact student academic performance (Paneque & Barbetta, 2006). Teachers with a high sense of self-efficacy have confidence in their teaching ability as to effect student learning and are open to trying new teaching techniques to meet the needs of their students (Chu, 2011; Paneque & Barbetta, 2006; Siwatu, 2011). In contrast teachers with a low sense of self-efficacy perceive themselves to have minimal impact on student achievement and often give up more easily. Also, these teachers presume that students cannot learn due to factors outside of their control (Bandura, 1997; Paneque & Barbetta, 2006).

Bandura (1997) posits four sources of efficacy development. These include mastery experiences, vicarious experiences, physiological and emotional states, and social persuasion. The most influential of the four are mastery experiences. From Bandura's perspective, once efficacy beliefs are formed, they are difficult to change. Consequently, it is easier to impact change when teachers are in the foundational process in teacher preparation programs rather than when they are in the classroom (Bandura, 1997; Paneque & Barbetta, 2006).

Presumably, much like teaching staff, evaluators with a high sense of self-efficacy feel they have the knowledge and skills to adequately evaluate and diagnose ELLs for special education (Bandura, 1997; Chu, 2011; Lamorey & Wilcox, 2005). Above all, evaluator self-efficacy can influence the outcome of a student's referral to special education (Blatchley & Lau, 2010). However, a disconnect between an evaluator's knowledge of characteristics influencing second language acquisition and the background of each student often contributes to disproportionality in special education (Paneque & Barbetta, 2006; Chu, 2011; Paneque &

Barbetta, 2006; Siwatu, 2011). Much as the disconnect between a teacher's culture and that of her students may influence the chance of a linguistically diverse student being referred for an evaluation, the ethnic background and social class of the evaluation practitioner may influence the results of the assessment as well (Chu, 2011; Skiba et.al, 2002).

Eligibility Exclusionary Factors

For this reason, it is crucial for those making special education eligibility decisions to have skills and knowledge to make appropriate eligibility decisions for ELL students. Several processes have been put in place at the federal level to assist teachers and evaluators alike in making special education eligibility decisions for ELLs. The Individuals with Disabilities Education Improvement Act (IDEIA) of 2004 has additional requirements for the identification of ELLs in special education. The law requires the assessment methods used for evaluation be valid and reliable and used for the purpose in which they are intended to be used. Also, evaluation staff must ensure that the student's academic difficulties are not primarily the result of issues with hearing, vision, motor abilities, intellectual disability, emotional disturbance, environmental, cultural, economic disadvantaged, Limited English Proficiency (LEP), and a lack of educational opportunity (IDEIA, 2004; Stephens et al.2013).

These exclusionary factors were established to assist evaluators in making appropriate eligibility decisions for ELL students. The IDEIA (2004) requires a comprehensive Full Individual Evaluation (FIE) that assesses students in all areas of suspected disabilities, which is often written by a multidisciplinary team (MDT) and includes educational diagnosticians, Licensed Specialists in School Psychology (LSSPs) and/or Speech-Language Pathologists (SLPs). These professionals who come from varied educational training and backgrounds

(Fredrickson & Cline, 2009) come together to create an MDT. Regardless of the training received by these evaluators, federal law dictates that evaluation personnel consider cultural and linguistic issues when assessing students from diverse backgrounds (IDEIA, 2004). Despite these mandates, the number of ELLs in special education has not decreased (Stein, 2011; Stephens et al., 2013).

Special education evaluators (i.e., educational diagnosticians, LSSPs, and SLPs) are required, by professional licensure, certification, and professional organization standards, to consider cultural and linguistic issues when testing diverse learners (American Psychological Association, 2002; American Speech-Language-Hearing Association, 2004; Council for Exceptional Children, 2005). These organizations require that assessment professionals receive training in relevant knowledge and experiences regarding the role of cultural diversity. However, many evaluators lack the appropriate knowledge and training necessary to distinguish between the characteristics of SLD and the ELLs (Artiles et al. 2005; Arzubiaga et al.2008; Banerjee & Luckner, 2013; Becker, 2012; Collier & Thomas, 2009; Stein, 2011). Miranda (2008) recommends that training for evaluators include: (a) development of personal awareness, (b) knowledge regarding other cultures, and (c) opportunity to apply knowledge gained during training. Effective evaluation practitioners must have a thorough understanding of the characteristics of the cultural group being evaluated, including gaining awareness regarding their personal biases (Artiles et al. 2010). It is crucial for all practitioners to develop culturally responsive evaluation practices when evaluating CLD students for special education. Given the ongoing issues in appropriate identification, it appears imperative that we continue to enhance efforts in the identification, development, and implementation of evidence based strategies for professional learning as it relates to evaluating ELLs.

Effective Professional Learning

Presently, scant research has been conducted on how to conduct culturally competent evaluations; however, much of the research on teacher professional development can be extended to evaluators. In recent years there has been an increased focus on what constitutes effective professional learning. Teachers often participate in traditional forms of professional learning, which are designed to transmit a specific set of ideas, techniques or materials (Little, 1993). However, this type of training does not lead to a significant or sustained change in teacher practice (Cohen and Hill, 2000). In contrast, reform-oriented professional development is more effective than more traditional forms of professional development. Reform-oriented professional development includes activities such as study groups, teacher networks, mentoring, coaching, and other collaborative methods, which are believed to have more success in changing teacher behavior (Little, 1993). Effective professional learning consists of activities focused on training specific to the educator's area of expertise. Teachers are less likely to commit to making changes in their practice if they perceive the professional learning as disconnected from their daily practice. When teachers recognize the connection between training and other school improvement efforts, they are more likely to improve their practice (Steiner, 2004).

Furthermore, educators should be afforded opportunities for active participation in training instead of passively sitting through lectures. When teachers are actively engaged in personal learning through observations and collaborative work with colleagues to study of student work, they are more likely to improve their practice (Steiner, 2004). Examples of active participation include observing others, receiving feedback, analyzing student work or making presentations. Also, this type of learning should also consist of activities that are consistent with the necessary knowledge and skills of the educator, as well as with school district, state reforms

and policies. Effective professional learning should be ongoing and should include more than 20 hours of contact time (Desimone, 2011).

Another key component of effective professional development is the use of case studies. Case-based learning affords teachers an opportunity to reflect on their practice by examining a specific story or video that describes a particular classroom experience (Loucks-Horsley, Hewson, Love, & Stiles, 1998). Case-based models can cover a wide variety of instructional strategies including role play, simulations, and debates. Equally important, case studies provide opportunities for authentic learning situations that can strengthen the transfer of learning (Lombardi, 2007). An essential strategy using case studies for professional learning is to allow participants an opportunity to discuss key components of the case. Case studies potentially stimulate new thinking by providing educators with contradictory information that challenges their current practices. Use of case discussions has assisted in changing teachers' beliefs about how children learn, has increased teacher knowledge and has led to changes in instructional practices (Barnett & Friedman, 1997).

Effective case studies have a number of characteristics. The case studies must be aligned with the overall instructional goals and objectives, tell a story, focus on an important issue, and clearly provide a dilemma without resolving it. The cases should be relevant to the reader, provoke conflict, and force decision-making. Furthermore, the story shared in the case must create empathy with the main character (Herreid, 1997 and Wasserman, 1994). We presume these models of effective professional development hold true across domains. However, little evidence exists related to professional learning focused around a case-study model that is designed to increase the cultural competence of professionals.

Cultural Competence of Evaluation Staff

Cultural competence is defined as “a set of congruent behaviors, attitudes and policies coming together in a system or agency or among professionals that enable effective interactions in a cross-cultural framework” (Shams-Avari, 2005, p. 437). In the field of education, cultural competence is defined as “the ability of educators to successfully serve children and youth from all of the cultural backgrounds represented within the school population, and in particular, those students who are growing up in nondominant cultural contexts” (Landa, 2011, p. 12). The knowledge of direct experiences with the values, attitudes, beliefs, and customs of a particular cultural group can be used as a guide and a framework for collecting and evaluating any assessment data (Leigh, 2001). Cultural competence is crucial to conducting an appropriate nondiscriminatory assessment, and this competence in evaluation is believed to assist in reducing the number of ELLs misidentified as having a disability (Leigh, 2001).

Linguistic competency is also vital for an organization pursuing cultural competence (Shams-Avari, 2005). There are two distinct aspects of linguistic competency of evaluation personnel: (a) the ability to communicate effectively in the student’s native language, thus eliminating the need for an interpreter and (b) the evaluator’s knowledge base related to first and second language development and instructional services. However, the ability to communicate effectively in a student’s native language alone does not guarantee that the evaluation will be free from bias, nor does it ensure an objective, and non-biased assessment of the student (Ortiz & Flannagan, 1998; Shams-Avari, 2005).

Culturally Competent Assessment

Culturally competent assessment is operationally defined as a process of assessment that

does not contribute to the overrepresentation of minority students in special education (Skiba, 2002). Given the ever-growing diversity of learners in U.S. schools, it is essential that special education assessment personnel use culturally competent evaluation practices evaluating students for special education (Klotz and Canter, 2006). Cultural competence includes knowledge of one's culture and worldview, discrimination and biases, the student's culture and worldviews, and the ability to understand the world through diverse cultural lenses (Guiberson, 2009; Skiba, 2002). On the other hand, standardized assessments have inherently high levels of linguistic and content bias (O'Bryon & Rogers, 2010; Ochoa et al.1999; Ortiz, 2008). Also, standardized instruments often fail to include diverse groups in the normative samples. As a result, many of the assessment tools are inappropriate to use with CLD learners (Guiberson, 2009). Lastly, evaluation staff must embrace a culturally competent approach to evaluating students for special education to achieve an unbiased placement decision (Skiba et al., 2008; Sullivan, 2010).

The goal of the evaluation team is to determine whether the student's characteristics being deemed as a disability are not solely due to issues related to culture or language (Klotz & Canter, 2006). For this reason, it is critical that assessment personnel become experts at discerning when a student's underachievement is due to another disability that can be attributed to some other reason, such as a cultural disconnect in the classroom or issues related to second language acquisition (Chamberlain, 2005).

The literature is rich with recommendations for practitioners on how to conduct culturally appropriate evaluations (Banerjee & Guiberson, 2012; Blatchley & Lau, 2010; Chamberlain, 2005; Fiedler et al.2008; Figueroa & Newsome, 2006; Gomez-Cerrillo & Olvera, 2011; Guiberson, 2009; Klingner, Artiles, & Barletta, 2006; Klotz & Canter, 2006; McBride, 2011; Ortiz, 2008; Schroeder, Plata, Fullwood, & Price, 2013; Skiba et al.2008; Sullivan, 2010).

However, these reports do not provide empirical evidence as to how to improve the cultural competence of evaluation staff members or how cultural competence impacts eligibility decisions. Recommendations for conducting culturally competent evaluations suggest that individual evaluations are conducted in a culturally sensitive and non-discriminatory manner. This includes extending the time required to carry out the assessment, using standardized batteries in the student's native language, and conducting a full, chronological review of the student's educational and historical data, from birth to present. In addition, evaluators should review the student's educational history to rule out issues related to school attendance, family structure, household changes, as well as a medical and developmental history. A thorough review of the student's records provides critical information regarding areas of concern and is helpful in determining the context of the evaluation (Banerjee & Guiberson, 2012; Blatchley & Lau, 2010; Chamberlain, 2005; Fiedler et al.2008; Figueroa & Newsome, 2006; Gomez-Cerrillo & Olvera, 2011; Guiberson, 2009; Klingner, Artiles, & Barletta, 2006; Klotz & Canter, 2006; McBride, 2011; Ortiz, 2008; Schroeder, Plata, Fullwood, & Price, 2013; Skiba et al.2008).

Another fundamental aspect of a culturally competent evaluation is to identify whether a student needs to complete a language assessment, based on the student's language history, dominance, and proficiency (Blatchley & Lau, 2010; Klotz & Canter, 2006; Ortiz, 2008). When an evaluation of a student's language dominance should be conducted, the language dominance test must include speaking, listening, reading, and writing assessments. Once all assessment batteries have been administered, a debriefing session should be conducted with the evaluation staff to identify relevant assessment procedures, the student's motivation, as well as cultural factors that might interfere with obtaining reliable and valid results. The evaluation staff must consider how the roles of language, culture, and social history impact the student's academic or

behavioral difficulties when interpreting the results of the student's evaluation. It is imperative that the evaluation practitioners note in their report any information gathered through the use of interpreters as well as any modifications that may have been used during the testing process. The report should also provide statements regarding the limitations of the data (Blatchley & Lau, 2010; Klotz & Canter, 2006; Ortiz, 2008). With this in mind, evaluators should recognize that there are many reasons why a student may be exhibiting learning difficulties. Intrinsic factors are only part of the reason students face academic problems in school, and nondiscriminatory evaluations should begin with assessment efforts exploring the external causes that might be related to a student's learning difficulties.

In general, although much of the literature on the evaluation of ELLs focuses on best practices for conducting evaluations, to date only one study carried out by Schroeder et al. (2013), has investigated the evaluators' increasing knowledge of CLD learners and cultural diversity as it pertains to evaluations. The study used online training modules intended to help participants understand the issues related to the CLD students' academic and social development at school. The modules focused on issues related to academic and social development characteristics of CLD students' due to culturally incongruent experiences, language, expectations, demands made by schools, as well as best practices for evaluating CLD students for special education (Schroeder et al.2013). The findings of this study revealed that training in issues related to multi-cultural evaluations resulted in an improvement in self-reported attitudes of evaluation professionals towards CLD students (Schroeder et al., 2013).

In the study evaluation practitioners participate in nine online training programs intended to increase understanding of issues related to the CLD students' academic and social development at school. Job title or role of the evaluators participating in the study were not

specified. The training was completed in a one-month period and was delivered in module format. Each of the modules contained: (a) a lecture in the form of an Adobe Presenter presentation with audio voice-over and accompanying written materials, (b) an assignment requiring the participants to demonstrate understanding of the topic through written application of the concepts presented, and (c) a short-answer quiz that was used to determine the participants self-evaluation of their understanding of the modules.

The nine modules, divided into two units, focused on issues related to academic and social development characteristics of CLD students due to culturally incongruent experiences, language expectations, and demands made by schools. Unit one of this training was approximately 108 minutes in length, divided equally across the seven modules. The first two modules focused on cultural sensitivity and awareness, while, Module 3 concentrated on acculturation, language, and culture by providing information about how acculturation impacts CLD students academically and socio-behaviorally. Module 4 focused on how cultures are perceived and treated differently, including information about the consequences of being from a racially, ethnically, and linguistically diverse background. The information obtained in the first four modules helped set the stage for the remaining modules, which included understanding the challenges CLDs face (Module 5), as well as language proficiency and testing (Module 6). Finally, Module 7 addressed the disproportionate representation of CLD students in special education.

The second unit of the training provided information about the best practices for evaluating CLD students for special education. The topics of Modules 8 and 9 were ethical guidelines for assessing diverse learners, choosing appropriate assessment tools, and test interpretation. The second section of the training was approximately 58 minutes in length.

Before the training began, practitioners completed the Munroe Multicultural Attitude Scale Questionnaire (MASQUE) survey to determine their attitude toward and knowledge of cultural diversity (Munroe & Pearson, 2006; Schroeder et al.2013). Following the training modules, the MASQUE was re-administered. Above all, three major themes emerged from the results: the respondents reported that the characteristics of ELLs were multi-dimensional, the evaluators face many challenges when working with ELL students, and the practitioners who took the MASQUE survey said that additional training would assist them in evaluating and making eligible determinations for ELLs. The results revealed there was a significant difference in percentage of questions answered correctly when comparing scores before training modules to scores after the completion of the modules ($N = 29$), pre-test MASQUE ($M = 89.67, SD = 12.92$) and post-test MASQUE ($M = 95.99, SD = 9.61$), $t(28) = 2.262, p = .016$. Cohen's effect size value ($d = .55$) suggested a moderate effect. Finally, the results of this study indicate that cultural diversity training for evaluators can have a positive impact on their view of ELLs (Schroeder et al.2013).

The Current Study

Rationale

With the significant increase in the number of ELL students in public schools, and the difficulties educators face in distinguishing between language difference or disability, many ELL students are likely to undergo some form of psycho-educational assessment to determine the level of educational supports they need. It is critical that evaluation specialists have the knowledge and skill set to differentiate appropriately between academic issues related to the presence of an actual learning disability or language acquisition.

Though there have been a number of studies addressing teacher self-efficacy in relation to teachers of CLD learners (Chu, 2011; Chu, 2014; Frye, 2010; Hibel et.al, 2010; Paneque & Barbeta, 2006; Siwatu, 2011), little research has examined evaluator sense of self-efficacy, cultural competence and its influence on the diagnosing of ELLs with disabilities. Only one study has focused on culturally competent evaluations for special education (Schroeder et al.2013), which suggested that training in issues related to multi-cultural evaluations results in an improvement in self-reported attitudes of evaluation professionals towards CLD students. A deeper understanding of the relationship between self-efficacy and cultural competence will provide valuable insights for evaluation practitioners on how to conduct culturally competent assessments of ELLs, and hopefully lead to a reduction in the disproportionate representation of these students in special education.

The purpose of this study is to extend the existing literature on culturally relevant teaching strategies to culturally competent evaluations of ELLs for special education. This study will contribute to the literature regarding special education identification by assessing evaluators multi-cultural awareness, sense of self-efficacy in culturally responsive practice, and examining how these factors influence evaluators' diagnosis decisions in cases studies involving ELLs. Further, this study will examine whether receiving training on culturally competent evaluations will affect the variables above. Specifically, the study will address the following research questions:

1. How does evaluators' reported levels of cultural competence and sense of self-efficacy relate to their ability to distinguish between language difference and learning disability as measured by case-based diagnosis determination?
2. What evaluator characteristics (e.g. cultural background, years of experience, type of licensure/certifications held) correlate with their sense of cultural competence and self-efficacy?
3. Does training in Project PEAC³E (Preparing Evaluators to Accurately Conduct

- Culturally Competent Evaluations) have a positive impact on the evaluator's sense of cultural competence and self-efficacy?
4. Does training in Project PEAC³E have a positive impact on the evaluator's ability to distinguish between language difference and learning disability as measured by the case-based diagnosis determinations?
 5. Are the characteristics of evaluators (e.g., cultural background, years of experience, type of licensure/certifications held) predictive of accuracy of eligibility decisions?

Theoretical Framework

This study is rooted in the works of Albert Bandura's theory of self-efficacy and Lev Vygotsky's socio-cultural theory. According to Bandura (1977), self-efficacy is defined as one's confidence in his or her potential and ability to organize and effectively implement academic tasks. Self-efficacy hypothesizes that one's self-perception and one's ability affects their thoughts, feelings, motivation, and actions (Bandura, 1977). Many teachers with low self-efficacy may believe that they have little impact on their student's achievement. As a result, these teachers may quickly give up on efforts to improve the performance of their students, and they are more likely to refer their students to special education (Chu, 2011). Bandura's theory of self-efficacy exemplifies the notion that for a person to be successful in executing a certain task at a desired level of performance, an individual must be confident in one's abilities. The beliefs regarding one's capabilities influence behaviors thought patterns, and emotional reactions (Bandura, 1977). Contextually, it can be assumed that LSSPs, educational diagnosticians, speech-language pathologists, and other assessment specialists with a high sense of self-efficacy have the knowledge and skills to differentiate between disability and language acquisition (Bandura, 1997; Chu, 2011; Lamorey & Wilcox, 2005).

Another theory relevant to the proposed study is Vygotsky's sociocultural theory, which suggests culture comprises an individuals' society, biology, ecology, and history (McBride,

2011; Scrimsher & Tudge , 2003). As a result, the influence of one aspect of a situation cannot be seen as mutually exclusive from another. Foremost, one must understand a person's background and history to truly understand an individual, (McBride, 2011). Additionally, a child's development occurs as a result of the dynamic interaction between the individual and one's surrounding environment. For that reason, culture is viewed not as an external variable that affects a person's development, but as a central component of each individual's development (McBrine, 2011; Scrimsher & Tudge, 2003). Vygotsky's theory places significant emphasis on language, social interaction, and culture. Vygotsky postulated that the influence of society helps to shape knowledge and, in return, this influence affects cognitive development. A child's cognitive development is a direct result of the knowledge he acquires from the people and the environment around him/her. According to Vygotsky (1978):

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

Both, Bandura's self-efficacy theory and Vygotsky's socio-cultural theory explain the connection between one's self-efficacy, existing knowledge gained as a result of experience within one's culture and the resulting implications for student achievement. If students do not have the opportunity to have meaningful interactions with their peers at school, then, their academic achievement may be attenuated. The lack of rich learning experiences may contribute to a child's inability to attain grade level standards. As a result, evaluation specialists should take into consideration a milieu of factors including current academic functioning and learning opportunities afforded to the student. These factors may be the primary reason for lack of achievement (McBride, 2011; Scrimsher & Tudge, 2003).

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APPENDIX B
METHODOLOGICAL REVIEW

Participants

A large suburban school district sought to provide training for their evaluation staff on culturally competent evaluation practices. To compare these individuals' outcomes to other comparable assessment personnel in the state, two additional suburban school districts were recruited to serve as the comparison group. Treatment participants ($n = 100$) came from one large suburban school district and control participants ($n = 80$) were recruited from two neighboring suburban school districts. G*Power (Faul, Erdfelder, Lang, & Buchner, 2007) was used to determine a priori estimate of sample size needed for each planned statistical test. Assuming a Type I error rate of $\alpha = .05$ and a modest power level of $.8$, a total sample size of 27 would be required to detect a standardized mean difference effect size (d) of 0.5 in a one-tailed repeated measures t -test, and a total sample size of 102 to detect a similar effect size in an independent samples t -test. Furthermore, a sample size of 156 for a one-tailed repeated measures t -test and a total sample size of 620 for a similar independent samples t -test would be required to detect a small effect size of $d = 0.2$.

This study has been the first to attempt to quantify the impact of diversity awareness on the special education evaluators' ability to accurately determine qualification status of ethnically and linguistically diverse students. Therefore, no typical effect sizes were available for comparison purposes. Thus, the actual effect sizes observed will determine whether suitable sample sizes were obtained in the current study to provide adequate power in the various employed statistical tests. See Table B4.

Most of the participants were SLPs, LSSPs, or educational diagnosticians. All participants held advanced degrees in their area of profession. Educational diagnosticians were required to have a minimum of two years teaching experience before obtaining state certification.

The SLPs were certified by the Texas Department of State Health Services and LSSPs were licensed through the Texas State Board of Examiners of Psychologists.

District Demographic Characteristics

According to the state's education agency, the total student population of the treatment school district in the 2014-2015 school year was 63,814; with 68% of its student population considered economically disadvantaged compared to the state's average of 59%. The student demographic makeup consisted of 25% African-American, 45% Hispanic, 22% White, 1% American Indian, 6% Asian, less than 1% Pacific Islander, and 2% were two or more races. Also, 19% of the students were ELL (Texas Education Agency [TEA], 2014-2015). See additional data provided in Table B1 of Appendix B.

The total student population of Comparison Group 1's school district was 24,229 in 2014-2015, with 57% of its student population considered economically disadvantaged compared to the state's average of 59%. The student demographic was made up of 8% African-American, 39% Hispanic, 44% White, 1% American Indian, 5% Asian, less than 1% Pacific Islander, and 3% two or more races; and similar to the treatment group, approximately 19% of the student population was ELL (Texas Education Agency [TEA], 2014-2015). See data provided in Table B2 of Appendix B.

The total student population of Comparison Group 2 was 18,609 students in 2014-2015, with 43% of its student population identified as economically disadvantaged. The student demographic makeup consists of 10% African-American, 36% Hispanic, 46% White, 1% American Indian, 4% Asian, less than 1% Pacific Islander, and 3% two or more races.

Additionally, 9% of the student population was identified as ELL (Texas Education Agency [TEA], 2014-2015). See Table B3.

Recruitment

The treatment district requested the first author provide training on characteristics of second language learners and how to distinguish between language differences and disabilities to their evaluation personnel staff. It had been more than three years since any professional development related to assessing ELL had been provided and the district had seen a significant growth in the number of ELLs in their school district over that period. With this growth came an increase in the number of ELLs being referred for special education services.

All members of the district's evaluation team (i.e., LSSPs, SLPs, and educational diagnosticians) had the opportunity to participate in the training and corresponding study. Before the training session, the researcher informed the audience members about the current study, discussing the purpose and requirements and obtaining consent from those who wished to participate.

Assessment personnel from the control districts were invited to participate in the study via email by the researcher. To encourage a higher response rate, all participants had the opportunity to be included in a drawing for one of five, \$50 gift cards by entering their contact information, separate from their study responses. Participants were assured information provided would remain confidential; and activities had been approved by the university institutional review board and participating districts' office of research.

Intervention

The treatment group participated in Project PEAC³E training. This six-hour training focused on the required components of culturally competent evaluations. In addition, a case-based instructional model was used to support engagement and application of concepts presented.

The intent of this training was to assist participants in understanding the importance of reviewing all relevant educational data before making determinations of eligibility for the purpose of ruling out the exclusionary factors as the primary cause of the student's academic difficulties. The Project PEAC³E training was designed focusing on best practices for conducting professional learning using case-based studies, and focused on best practices for conducting special education evaluations for ELLs (Cohen & Hill, 2000; Desimone, 2011; Loucks-Horsley et al., 1998). A case-study on a struggling ELL was provided to the participants. Throughout the course of the training, the participants were afforded the opportunity to collaborate with one another and with the presenter regarding different components of the case study. Participants read through the case study and discussed possible variables affecting the student's learning. As the participants learned more about the student in the case, the researcher discussed key components associated with second language acquisition, issues related to the misidentification of ELLs in special education, how to evaluate students who speak other languages, as well as how to review educational, ecological and evaluation data effectively to appropriately identify ELL students for special education. The ultimate goal of the current study was to determine whether or not evaluation staff acquired a deeper understanding of the influence of second language acquisition on academic achievement of ELL students

following the Project PEAC³E training. In an effort to identify outcomes associated with the training, other key tools were used to assess learner outcomes.

Instrumentation

Survey Measures

A modified version of the Culturally Responsive Teacher Self-Efficacy (CRTSE) and the Munroe Multicultural Attitude Scale Questionnaire (MASQUE) were used as a pretest and posttest with permission of the authors. The CRTSE measures an individual's belief in one's abilities to perform practices associated with culturally responsive teaching (Siwatu, 2011). This survey was created for pre-service teachers and was developed based on Bandura's (1977) self-efficacy theory. The CRTSE is a 40-item Likert scale survey, and its purpose is to rate how confident participants are in their capability to work with CLD students. The internal reliability of scores from this instrument has been reported to be .96 (Siwatu, 2011). The modified version of the survey consists of two parts. The first section includes questions regarding the respondent's professional background (i.e., years in the profession, age, race, gender, primary language spoken, the highest level of education, years of employment, and current position). The second section of the survey is comprised of the original CRTSE items that have been adapted for use with evaluation staff.

The MASQUE is an 18-item self-report survey using a 6-point Likert scale, ranging from one (strongly disagree) to six (strongly agree), and is designed to measure the multicultural attitudes of an individual. The items on the MASQUE test are divided into three subscales: know, care, and act (Munroe & Pearson, 2006). Higher scores on the MASQUE indicate one's attitudes towards multiculturalism are more positive (Munroe & Pearson, 2006). The authors of

this measure reported an internal consistency of .80 for this measure. Although the initial data were based on a small sample, a Cronbach's alpha internal reliability of .72 was reported and deemed adequate (Munroe & Pearson, 2006).

Adaptation of Measures

Modifications were made to both the CRTSE and MASQUE surveys to ensure that the items specifically focus on the aspects associated with evaluating ELLs for special education.. The new instrument was used to collect both quantitative and qualitative data to answer the aforementioned research questions (Creswell, 2008). A panel of five experts experienced in evaluating ELL students for special education assisted in reviewing the initial draft of the content of the survey and the layout. Also, changes were made to the draft of the study by adding new questions, clarifying the meaning of existing items, or removing unnecessary questions based on the experts' recommendations. Finally, the revised survey was piloted with five additional specialists, with revisions made based on their feedback.

Eligibility Case Studies

A set of three case studies presenting prospective special education students were developed and used in this study. Each case study offered the information necessary to make an eligibility determination, including the student developmental history, language scores, socio-cultural information, educational history, cognitive scores, achievement scores, and other educational data. Evaluators were provided with this information and asked to decide whether the student met the criteria for special education. If participants were to look solely at the results of the assessment batteries in the three cases without looking at other relevant data (e.g., number

of years in U.S. schools, attendance, grades and language of instruction), all three students would appear to meet the criteria for special education eligibility based solely on quantitative data. However, a more comprehensive review including the learning ecology data and other qualitative data provided in each case study should result in a different determination in a couple of cases. The respondents were asked to make a determination regarding student eligibility based on their knowledge of ELLs, their knowledge of culturally competent evaluation practices, as well as on their evaluator self-efficacy. Two of the case studies provide data reflective of students who are experiencing academic difficulties due to issues related to second language acquisition. One of the case studies is a student who despite being an ELL would meet eligibility for special education.

A panel of nine experts in evaluating ELLs reviewed the case studies to ensure that all relevant and necessary data was included before the cases were disseminated. Adaptations or changes were made to the case studies based upon the recommendations of the experts. The revised case studies were reviewed by the panel a second time for final approval.

Since the evaluation process is subjective and suspected to be based in part on the background of the evaluator and his or her understanding of cultural and linguistic differences, the level of confidence in the qualification decisions were assessed through a Likert-type scale. This approach will allow for a more nuanced evaluation of the decision-making process than would be allowed through a simple Yes/No determination of eligibility, and allows for a wider range of statistical analyses to be employed to determine relationships between study groups and study variables. When making comparisons of accuracy of qualification decisions between groups (e.g. control vs. treatment), use of dichotomous responses (i.e. correct/incorrect) limits analysis to categorical methods, such as a chi-square test of independence. On the other hand,

expressing decision making across a range of responses opens the analysis to the use of methods appropriate for ordinal or continuous data.

After the evaluators completed the individual inspection and analysis of the case study documentation, they were asked to respond to the following question: “Based on your evaluation of the documentation for this student, how likely do you feel that the student qualifies for special education services?” using a Likert response from the following scale: 1 = *very unlikely to qualify*; 2 = *unlikely to qualify*; 3 = *somewhat unlikely to qualify*; 4 = *somewhat likely to qualify*; 5 = *likely to qualify*; 6 = *very likely to qualify*. A 6-point scale was selected over a 4-point scale to afford a wider range of possible responses increasing the potential variance in scores across the sample group. Increased score variance allows for greater discrimination among respondents and tends to increase internal consistency reliability of scores from an instrument (Crocker & Algina, 1986).

Since the scale has an even number of choices, the evaluators were required to make a choice to either qualify or not qualify the case study student, which allows the responses to be split into two groups, indicating characterizing whether or not evaluators had made the “correct” qualifying decision. These categorical outcomes were evaluated using a chi-square analysis and served to provide an alternative method of interpreting outcome data.

Data Collection and Analysis

Survey data were collected on participants’ responses for the modified version of the CRTSE, the MASQUE and the three case studies. The survey was sent to participants electronically via Qualtrics.

Treatment District

Immediately prior to the start of the Project PEAC³E training, participants in the treatment group completed the modified CRTSE and MASQUE surveys, and reviewed Case Study 1 to make an eligibility decision as a pre-test. Following training, the modified CRTSE and MASQUE surveys were re-administered as a post-test. In addition, documentation for Case Studies 1, 2 and 3 were provided and participants asked to make an eligibility decision for each. The intent of providing Case Study 1 both pre- and post-test was to determine whether evaluators' decisions regarding student eligibility changed once training was provided.

Comparison Districts

Evaluators from two additional districts were invited via email to participate in the survey during the same week as the Project PEAC³E training. Any eligible participants in the treatment district who were not able to attend the training were also invited to participate in the study as part of the comparison group. Participants were asked to complete the modified version of the CRTSE and the MASQUE, and make an eligibility decision for Case Studies 1, 2 and 3. Surveys were held open for one month. In order to ensure similar backgrounds between treatment and comparison groups, a matched samples analysis was performed. Potential comparison group participants were individually matched with treatment group participants using the following background characteristics: evaluator role (e.g. diagnostician), years' experience as an evaluator, fluency in a language other than English, and highest degree earned. It was felt that these characteristics would most likely be related to evaluator self-efficacy, cultural competence, and field experience in evaluating ELLs. Survey responses were downloaded from Qualtrics, aggregated, and all personally identifiable data was removed prior to analysis and reporting of

the results. Descriptive statistics were generated based on demographic information provided by participants and individual item responses from the surveys. All inferential statistical analyses (i.e. *t*-tests and linear regression) were performed using SPSS v. 23.0.

Table B1

2014-2015 Treatment District Student Demographics

Student Demographics	District Count	District Percentage	State Percentage
Ethnic Distribution			
African American	15,610	24.5%	12.6%
Hispanic	28,399	44.5%	52.0%
White	14,019	22.0%	28.9%
American Indian	296	0.5%	0.4%
Asian	3,992	6.3%	3.9%
Pacific Islander	127	0.2%	0.1%
Two or More Races	1,371	2.1%	2.0%
Economically Disadvantaged	43,512	68.2%	58.8%
English Language Learners (ELL)	16,820	26.4%	18.2%
At-Risk for Academic Failure	41,150	64.5%	51.2%

Table B2

2014-2015 Comparison Group 1 District Student Demographics

Student Demographics	District Count	District Percentage	State Percentage
Ethnic Distribution			
African American	1,995	8.2%	12.6%
Hispanic	9,583	39.4%	52.0%
White	10,623	43.7%	28.9%
American Indian	160	.7%	0.4%
Asian	1,223	5.0%	3.9%
Pacific Islander	75	0.3%	0.1%
Two or More Races	670	2.8%	2.0%
Economically Disadvantaged	13,889	57.1%	58.8%
English Language Learners (ELL)	4,493	18.5%	18.2%
At-Risk for Academic Failure	11,789	48.5%	51.2%

Table B3

2014-2015 Comparison Group 2 District Student Demographics

Student Demographics	District Count	District Percentage	State Percentage
Ethnic Distribution			
African American	1,868	10.0%	12.6%
Hispanic	6652	35.7%	52.0%
White	8585	46.1%	28.9%
American Indian	133	0.7%	0.4%
Asian	729	3.9%	3.9%
Pacific Islander	46	0.2%	0.1%
Two or More Races	596	3.2%	2.0%
Economically Disadvantaged	8006	43.0%	58.8%
English Language Learners (ELL)	1575	8.5%	18.2%
At-Risk for Academic Failure	7804	41.9%	51.2%

Table B4

A Priori Power Analysis

Statistical test	Effect size (<i>d</i>)	α (Type I error)	Power (1- β)	Total sample size needed
<i>t</i> -test (repeated measures)	0.5 (medium)	.05	.8	27
	0.4			41
	0.3			70
	0.2 (small)			156
<i>t</i> -test (independent samples)	0.5 (medium)	.05	.8	102 (51 x 2)
	0.4			156 (78 x 2)
	0.3			278 (139 x 2)
	0.2 (small)			620 (310 x 2)

APPENDIX C
INSTITUTIONAL REVIEW BOARD DOCUMENTATION



Research and Economic Development
THE OFFICE OF RESEARCH INTEGRITY AND COMPLIANCE

April 27, 2016

Dr. Endia Lindo
Student Investigator: Christina Rodriguez
Department of Educational Psychology
University of North Texas
RE: Human Subjects Application No. 16-164

Dear Dr. Lindo:

In accordance with 45 CFR Part 46 Section 46.101, your study titled "Culturally Competent Evaluations" has been determined to qualify for an exemption from further review by the UNT Institutional Review Board (IRB).

Enclosed are the consent documents with stamped IRB approval. Please copy and **use this form only** for your study subjects.

No changes may be made to your study's procedures or forms without prior written approval from the UNT IRB. Please contact The Office of Research Integrity and Compliance at 940-565-4643, if you wish to make any such changes. Any changes to your procedures or forms after 3 years will require completion of a new IRB application.

We wish you success with your study.

Sincerely,

A handwritten signature in black ink, appearing to read "CT", is written over a horizontal line.

Chad Trulson, Ph.D.
Professor
Chair, Institutional Review Board

CT:JH

University of North Texas Institutional Review Board

Informed Consent Form

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose, benefits and risks of the study and how it will be conducted.

Title of Study: Culturally Competent Evaluations

Supervising Investigator: Endia Lindo University of North Texas (UNT) Department of Educational Psychology

Student Investigator: Cristina Rodríguez Chen University of North Texas (UNT) Department of Educational Psychology

Purpose of the Study: You are being asked to participate in a research study which investigates special education evaluation staffs' self-efficacy and cultural competence when evaluating English Language Learners (ELLs) for special education. The results from this study will benefit the field of special education, with the potential for informing and possibly enhancing targeted professional development.

Study Procedures: You will be asked to complete an anonymous survey concerning your knowledge of evaluating ELLs for special education. The survey will take approximately 20 minutes to complete. In addition to the survey, you will be asked to review three case studies taking approximately 40 minutes. Based on the information presented in the case studies, you will make decisions regarding whether or not the students are eligible for special education services.

Foreseeable Risks: No foreseeable risks are involved in this study.

Benefits to the Subjects or Others: The information gathered from this study will benefit other special education evaluation staff as it will inform the planning and development of the necessary training needed by evaluators needed to conduct culturally competent evaluations of ELLs in an effort to reduce misidentification of these students in special education. These finding will also provide the broader field of special education regarding how to conduct culturally competent evaluations by potentially enhancing teacher training and larger professional development efforts.

Compensation for Participants: Participants who provide their contact information will be chosen using a random selection to receive a \$50 Amazon gift card. Participants will be informed that although they provide their contact information, the information will not be connected to their responses in any way.

Procedures for Maintaining Confidentiality of Research Records: No personal information will be collected in the survey. If you elect to participate in the study, any information collected from the participants will be handled only by Cristina Chen and Endia Lindo, Ph.D. No personal information about the participants, including social security numbers, addresses, phone numbers, or employee identification numbers will be collected. All data records and informed consent forms will be stored in the Supervising Investigator's office on the UNT campus.

APPROVED BY THE UNT IRB

DATE: 4-26-16
[Signature]

Questions about the Study: If you have any questions about the study, you may contact Cristina Rodríguez Chen at cristina.chen@birdvilleschools.net or Dr. Endia Lindo at Endia.Lindo@unt.edu.

Review for the Protection of Participants: This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at 940-565-4643 with any questions regarding the rights of research subjects.

Research Participants' Rights:

Your signature below indicates that you have read or have had read to you all of the above and that you confirm all of the following:

- Cristina Rodríguez Chen has explained the study to you and answered all of your questions. You have been told the possible benefits and the potential risks and/or discomforts of the study.
- You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You have been told you will receive a copy of this form.

<input type="checkbox"/>	I agree to participate.
<input type="checkbox"/>	I do not want to participate.

Printed Name of Participant

Email

Signature of Participant

Date

For the Investigator or Designee:

I certify that I have reviewed the contents of this form with the subject signing above. I have explained the possible benefits and the potential risks and/or discomforts of the study. It is my opinion that the participant understood the explanation.

Signature of Investigator or Designee

Date

APPROVED BY THE UNT IRB
DATE: 4-26-16
JAA

University of North Texas Institutional Review Board

Informed Consent Form

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose, benefits and risks of the study and how it will be conducted.

Title of Study: Culturally Competent Evaluations

Supervising Investigator: Endia J. Lindo University of North Texas (UNT) Department of Educational Psychology

Student Investigator: Cristina Rodríguez Chen University of North Texas (UNT) Department of Educational Psychology

Purpose of the Study: You are being asked to participate in a research study which investigates special education evaluation staffs' self-efficacy and cultural competence when evaluating English Language Learners (ELLs) for special education. The results from this study will benefit the field of special education, with the potential for informing and possibly enhancing targeted professional development.

Study Procedures: You will be asked to complete an anonymous survey concerning your knowledge of evaluating ELLs for special education. The survey will take approximately 20 minutes of your time to complete. In addition to the survey, you will be asked to review three case studies (approximately 40 minutes). Based on the information presented in the case studies, you will make decisions regarding whether or not the students are eligible for special education services. To complete all portions of the study should take approximately 1 hour.

Foreseeable Risks: No foreseeable risks are involved in this study.

Benefits to the Subjects or Others: The information gathered from this study will benefit other special education evaluation staff as it will inform the planning and development of the necessary training needed by evaluators needed to conduct culturally competent evaluations of ELLs in an effort to reduce misidentification of these students in special education. These finding will also provide the broader field of special education regarding how to conduct culturally competent evaluations by potentially enhancing teacher training and larger professional development efforts.

Compensation for Participants: Participants who provide their contact information will be chosen using a random selection to receive a \$50 Amazon gift card. Participants will be informed that although they provide their contact information, the information will not be connected to their responses in any way.

Procedures for Maintaining Confidentiality of Research Records: No personal information will be collected in the survey. If you elect to participate in the study, any information collected from the participants will be handled only by Cristina Chen. No personal information about the participants, including social security numbers, addresses, phone numbers, or employee identification numbers will be collected. All data records and informed consent forms will be stored in a locked cabinet in the Supervising Investigator's office on the UNT campus.

APPROVED BY THE UNT IRB

DATE: 4/26/16

CP

Questions about the Study: If you have any questions about the study, you may contact Cristina Rodríguez Chen at cristina.chen@birdvilleschools.net or Dr. Endia Lindo at Endia.Lindo@unt.edu.

Review for the Protection of Participants: This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at 940-565-4643 with any questions regarding the rights of research subjects.

Research Participants' Rights:

Your signature below indicates that you have read or have had read to you all of the above and that you confirm all of the following:

- Cristina Rodríguez Chen has explained the study to you and answered all of your questions. You have been told the possible benefits and the potential risks and/or discomforts of the study.
- You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You have been told you will receive a copy of this form.

<input type="checkbox"/>	I agree to participate.
<input type="checkbox"/>	I do not want to participate.

Printed Name of Participant

Email

Signature of Participant

Date

For the Investigator or Designee:

I certify that I have reviewed the contents of this form with the subject signing above. I have explained the possible benefits and the potential risks and/or discomforts of the study. It is my opinion that the participant understood the explanation.

Signature of Investigator or Designee

Date

APPROVED BY THE UNT IRB

DATE: 4-26-16



APPENDIX D
EXPANDED RESULTS

Sample

A convenience sample of 40 evaluation professionals (20 treatment and 20 control) were included in the final analysis. These 40 represent 34 diagnosticians, 4 LSSPs, and 2 SLPs. Sixty-three percent had more than 10 years of experience in evaluating students for special education. In addition, 95% of those in the sample hold a master's degree, while another 2.5% have a doctorate.

Treatment Group

A total of 40 evaluation professionals from the treatment district attended the six-hour training session. However, only 50% ($n = 20$) were retained in the final sample with 5 choosing not to participate in the study and the other 15 not completing all components of the study.

Comparison Group

A total of 147 evaluation professionals from 3 districts were contacted by email for participation as the comparison group of which 33% ($n = 49$) responded by opening the survey. Of these, 10 were excluded from the pool because they chose to not participate or did not complete all study components. Background characteristics (i.e. evaluator role, years' experience as an evaluator, fluency in a language other than English, and highest degree earned) of the remaining 39 respondents were then used to produce paired matches with the 20 treatment group participants to derive the final comparison group.

Participant Background

Diagnosticians constituted 85% of both the treatment and comparison groups and half (n

= 10) of each group had more than 10 years of experience in special education evaluation. All of the treatment group held a masters' degree and all but one participant in the comparison group held masters' degrees or higher. The treatment group had slightly more participants than the comparison group who indicated they spoke a language other than English; however, both groups had 3 participants who indicated they were fluent in another language. The vast majority of participants in each group were White females. Table D1 provides background information on the treatment and comparison group participants.

Survey Results

Treatment group participants were administered the Appraisal and Expectancy subscales of the CRTSE modified for evaluators and the MASQUE, both before and after receiving training on the use of culturally responsive evaluation methods. The modified CRTSE was used to assess evaluator self-efficacy. The maximum total score on the instrument was 500, and the minimum score possible was 0, with higher scores indicating greater evaluator self-efficacy. Descriptive statistics and internal consistency reliability data are provided for CRTSE and MASQUE items in Table D2.

Scores obtained with the modified CRTSE demonstrated excellent internal consistency reliability, measured as Cronbach's alpha (Cronbach, 1955). Alphas ranged from .90 on the Appraisal subscale for the treatment group before training to .97 on the Appraisal subscale for the control group (Table D2). These values are consistent with alpha estimates of .96 obtained by Siwatu (2011) for the original CRTSE instrument and provide evidence for the strong internal consistency reliability of the modified version of CRTSE.

The MASQUE (Munroe & Pearson, 2006), used to measure attitudes toward cultural diversity, produced a score reliability ranging from .90 on the pre-treatment administration for the treatment group to .79 on the post-treatment administration, a decrease of .11 between pre- and post-test. These values are considerably greater than the alpha estimate of .72 determined by Munroe and Pearson (2006).

Total scores on the pre-treatment administration of the CRTSE and MASQUE appeared to be slightly higher in the comparison group than the treatment group. For example, mean total score on the Appraisal subscale of the CRTSE was 189.32 for the treatment group and 198.65 for the comparison group. MASQUE pre-treatment scores were slightly greater for the control group ($M = 108.39$) than the treatment group ($M = 103.63$). Mean post-treatment scores for the CRTSE were greater than pre-treatment scores for both the Appraisal and Expectancy subscales; however, pre/post scores for the MASQUE do not appear to differ considerably (Table D2).

To address whether training using PEAC³E may have an impact on evaluators' sense of self-efficacy and cultural competence, pre- and post-treatment scores on CRTSE and MASQUE were compared using paired-samples *t*-tests. Pre-training scores for the treatment group ($M = 407.79$, $SD = 38.76$) were not significantly different ($t(38) = 1.15$, $p = .26$, $d = 0.36$) than those for the comparison group ($M = 422.85$, $SD = 43.69$), suggesting that despite a slightly lower mean score on the measure of cultural responsive self-efficacy the treatment group did not have unusually low scores on the CRTSE prior to training. Mean total scores on the CRTSE for the treatment group before training ($M = 407.79$, $SD = 38.76$) and after training ($M = 442.69$, $SD = 40.15$) were significantly different, $t(19) = 4.36$, $p < .001$, $d = 0.88$. These results suggest that the training was related to a large and positive impact on the overall self-efficacy scores of the treatment group.

Also using a paired-samples *t*-test, the mean total scores on the MASQUE for the treatment group before training ($M = 103.63$, $SD = 11.99$) and after training ($M = 105.60$, $SD = 10.25$) were not significantly different, $t(19) = 1.10$, $p = .29$, $d = 0.18$. Pre-training scores for the treatment group were not significantly different, $t(38) = 0.79$, $p = .44$, $d = 0.25$, than those for the comparison group ($M = 108.39$, $SD = 12.05$), suggesting that the treatment group had typical scores on the MASQUE prior to training. These results suggest that the training did not result in a detectable increase in scores related to the multicultural attitudes of the treatment group.

Case Study Results

Treatment group participants were provided case study documentation and asked to make a determination as to whether evidence suggested that the child qualifies for special education services. Case Study 1 was evaluated both before and after training; Case Studies 2 and 3 were only evaluated after training. Comparison group participants made qualification decisions on all three case studies. Case Studies 1 and 2 provided evidence that the child evaluated did not meet criteria for special education services and one of the three “Unlikely to Qualify” responses was considered to be a correct determination. A correct determination for Case Study 3 was deemed to be any response that the child was “Likely to Qualify.” A summary of results of case studies is provided in Table D3.

It is of note that the use of a scale forming a continuum of surety in the qualification decision in the case studies is different from the real-life dichotomous decisions (Qualifies vs. Does Not Qualify) that evaluation staff make on a daily basis as part of their work. By splitting the response distribution between ratings of 3 (Somewhat unlikely to qualify) and 4 (Somewhat likely to qualify) allows for the determination of the correctness of the decision. Based on

responses of both the comparison and treatment groups, most evaluators were able to correctly determine that the child in Case Study 1 was unlikely to qualify, with percentages of correct determinations ranging from 80% for the pre-treatment case to 95% for both the post-treatment and control group cases (Table D3). There was a 15-percentage point increase in the accuracy of placement determinations between pre- and post-treatment evaluation of Case Study 1. This apparent increase in accuracy was based on three additional participants making a correct evaluation decision in the post-test as compared to the pre-test. Evaluation of the z-ratio indicated that this increase was not significant, $z = 1.42, p = .15$. On the other hand, results from Case Study 2 indicated that only 40% of control group respondents chose the correct determination that the child does not qualify, while 65% of the treatment group made the right determination following the PEAC³E training. Using a z-ratio it was determined that there was not a significant difference in accuracy of placement determinations between treatment (65% accuracy) and comparison (40% accuracy) group evaluators for Case Study 2, $z = 1.58, p = .11$.

Relationship between Self-Efficacy, Cultural Competence, and Case Study Determinations

To address whether evaluator self-efficacy and cultural competence enhance case-based diagnosis determinations, evaluator placement decisions were evaluated to determine if they could be predicted from CRTSE and MASQUE scores. Since the dependent variable was based on a Likert-type scale, an ordinal regression was performed using pre-training ratings for Case Study 1 (i.e. from 1 = very unlikely to qualify to 6 = very likely to qualify) as the outcome variable and total scores on the CRTSE and MASQUE as predictor variables for combined pre-treatment and control groups. Results of the regression suggested that CRTSE and MASQUE did not provide a significant improvement in the predictive ability of the model over the intercept

only, $X^2(2) = 1.97, p = .37$, and effect size for the full model was small, Nagelkerke Pseudo $R^2 = .05$. Neither CRTSE, Wald $X^2(1) = 0.36, p = .55$, nor MASQUE, Wald $X^2(1) = 1.87, p = .17$, were significant predictors of eligibility determination based on Case 1 (see Table D4).

To determine if CRTSE and MASQUE scores were predictive of a correct (dichotomous) determination of eligibility, the Case Study 1 data were recoded as 1 = correct classification (Does not qualify) or 0 = incorrect classification (Qualifies) and the analysis was repeated. This second analysis also indicated that the model including CRTSE and MASQUE did not significantly improve the intercept only model, $X^2(2) = 0.72, p = .70$, and also produced a small effect size, Nagelkerke Pseudo $R^2 = .03$. Neither CRTSE, Wald $X^2(1) = 0.27, p = .60$, nor MASQUE, Wald $X^2(1) = 0.19, p = .66$, were significant predictors. These results suggest that CRTSE and MASQUE are not predictive of evaluators' ability to accurately classify determination decisions for Case Study 1.

To determine whether CRTSE and MASQUE were predictive of the accuracy of determination of eligibility for Case Studies 2 and 3, similar ordinal regression analyses to those described above were performed on post-training classifications by the treatment group participants only. In no case did the models including CRTSE and MASQUE significantly improve prediction over the intercept-only models, nor were CRTSE or MASQUE identified as significant predictors. Table D4 provides a summary of the six regression analyses performed.

Relationship between Evaluator Characteristics, Self-Efficacy, and Cultural Competence

This study also sought to better understand the relationship between evaluator characteristics and their reported levels of self-efficacy and cultural competence. This question was addressed by regressing CRTSE and MASQUE scores from comparison and pre-treatment

group on participants' current evaluator role, the number of years of experience as an evaluator, fluency in a language other than English, race/ethnicity, and gender in a multiple linear regression model. Coding for predictor (independent) variables was as follows: role (0 = LSSP or SLP, 1 = diagnostician); evaluator experience (1 = less than five years, 2 = five to ten years, 3 = more than ten years); fluency (0 = not fluent, 1 = fluent in a language other than English); race/ethnicity (0 = White, 1 = other); and female (0 = male, 1 = female). The analysis was repeated using four different outcome variables: CRTSE Appraisal subscale; CRTSE Expectancy subscale, CRTSE total scale, and MASQUE total scale. In all cases, the predictors were entered into the model simultaneously.

Bivariate correlations between all predictor and outcome variables did not suggest that a relationship exists between evaluator characteristics and self-efficacy or cultural competence (Table D5). Among the predictor variables, significant correlations were only detected between gender and evaluator role, $r = .33, p = .02$, and gender and fluency, $r = -.50, p < .01$. As might be expected, several correlations between self-efficacy and cultural competence measures were significant (Table D5). Scores on the Appraisal component of the CRTSE were positively and significantly correlated with both the Expectancy component, $r = .36, p = .01$, and the MASQUE total score, $r = .43, p < .01$. Also, the MASQUE was significantly correlated with the total score on CRTSE, $r = .38, p < .05$, but the correlation between MASQUE and the Expectancy component of CRTSE was not significant, $r = .16$.

To examine the relationship between evaluator characteristics and evaluator self-efficacy and multicultural awareness, a series of multiple regression analyses was performed on pre-treatment CRTSE and MASQUE self-appraisal scores using evaluator role, years of experience, fluency in a language other than English, race/ethnicity, and gender as predictors. The results of

the four regression analyses are provided in Table D6. None of the regression models significantly predicted self-reported CRTSE or MASQUE scores. This finding suggests that, for the sample included in this study, evaluator characteristics do not significantly predict scores on the CRTSE or the MASQUE.

Relationship between Evaluator Characteristics and Case Study Determinations

To better understand the relationship exists between evaluator characteristics and eligibility decisions, an ordinal regression was performed using evaluator case study decisions coded on the six-point scale as the dependent variable and evaluator role (0 = LSSP or SLP, 1 = diagnostician), experience as an evaluator (1 = less than five years, 2 = five to ten years, 3 = more than ten years); and fluency (0 = not fluent, 1 = fluent in a language other than English) as categorical or ordinal predictors. To increase sample size, results for treatment (pre-treatment) and control groups were combined for Case Study 1. For Case Studies 2 and 3, only the post-treatment data were evaluated. Table D7 provides results of the ordinal regression analyses. Results suggest that evaluator role, experience, and fluency in languages other than English were not predictive of ratings on the six-point scale for any of the three case studies. Inclusion of role, experience and fluency did not provide a significant improvement in predictive ability of the model over the intercept only for Case Study 1, $X^2(58) = 4.34, p = .23$, Case Study 2, $X^2(58) = 1.04, p = .79$, or Case Study 3, $X^2(58) = 1.08, p = .78$. Also, in none of the three models was role, experience, or fluency significant predictors of case study ratings (Table D7).

The potential relationship between evaluator characteristics and accuracy of case study determinations were also evaluated using a Chi-square analysis for each of the three case studies and evaluator characteristics. Respondent ratings on the six-point scale were dichotomized to

reflect whether the evaluator made a correct or incorrect placement decision based on the case study documentation provided. These correct/incorrect responses were then classified according to the participant's background characteristics, i.e. role, years of experience as an evaluator, and fluency in a language other than English. The resulting 2 X 2 (role and fluency) and 2 X 3 (experience) frequency tables, as well as results of chi-squared analyses, are provided in Table D8. As with the ordinal regression analysis described above, control and pre-treatment results for Case Study 1 were combined, while only post-treatment results for the treatment group were subjected to analysis for Case Studies 2 and 3.

For the nine chi-squared analyses performed, in no case was a significant relationship found to exist between evaluator characteristic and accuracy of case study determinations. Chi-square values ranged from 0.06 ($p = .81$) for the fluency variable in Case Study 3 to 2.97 ($p = .24$) for the experience variable for Case Study 1. While none of the chi-square values proved to be significant in these analyses, effect sizes, measured as Cramér's V , ranged from .06 for fluency in Case Study 3, to .31 for role in Case Study 2 (Table D8). Cohen (1988) suggested rules of thumb for minimum sizes for small, medium, and large values of Cramér's V at .10, .03, and .05, respectively, which suggests that this study produced effect sizes that ranged from below small to medium in size.

Table D1

Background of Study Participants

	Treatment		Comparison		Total	
	n	%	n	%	n	%
<i>Evaluator Role</i>						
Diagnostician	17	85	17	85	34	85
LSSP	2	10	2	10	4	10
SLP	1	5	1	5	2	5

Total	20		20		40	
<i>Special Education Evaluation Experience</i>						
1 to 4 years	8	40	6	30	15	25
5 to 10 years	2	10	4	20	7	12
More than 10 years	10	50	10	50	37	63
<i>Highest Degree Held</i>						
Bachelor's	-	-	1	5	1	2.5
Master's	20	100	18	90	38	95
Doctorate	-	-	1	5	1	2.5
<i>Speaker of Languages Other than English</i>						
No	13	65	16	80	29	72.5
Yes	7	35	4	20	11	27.5
Fluent	3	15	3	15	6	15
<i>Race/Ethnicity</i>						
African American	2	10	-	-	2	5
Hispanic	2	10	1	5	3	7.5
Native American	-	-	1	5	1	2.5
Two or More Races	-	-	1	5	1	2.5
White	16	80	17	85	33	82.5
<i>Sex</i>						
Male	3	15	1	5	4	10
Female	17	85	19	95	36	90

Table D2

Descriptive and Psychometric Statistics for Modified CRTSE and MASQUE

Scale	Items	Treatment (n = 20)			Comparison (n = 20)			Total Group (n = 40)		
		<i>M</i>	<i>SD</i>	α	<i>M</i>	<i>SD</i>	α	<i>M</i>	<i>SD</i>	α
<i>Pre-treatment</i>										
CRTSE Appraisal	25	189.32	24.83	.90	198.65	33.29	.95	193.98	29.37	.93

CRTSE Expectancy	25	218.48	22.69	.96	224.20	18.50	.95	221.34	20.64	.96
CRTSE Total	50	407.79	38.76	.93	422.85	43.69	.95	415.32	41.47	.95
MASQUE	18	103.63	11.99	.90	108.39	12.05	.91	106.01	12.11	.91
<i>Post-treatment</i>										
CRTSE Appraisal	25	210.24	27.60	.95						
CRTSE Expectancy	25	232.45	16.92	.97						
CRTSE Total	50	442.69	40.15	.97						
MASQUE	18	105.60	10.25	.79						

Table D3

Case Study Results

Case Study Rating	Comparison (<i>n</i> = 20)			Treatment (<i>n</i> = 20)			
	CS1	CS2	CS3	CS1 Pre	CS1 Post	CS2 Post	CS3 Post
1 = Very Unlikely to Qualify	7	2	0	5	5	3	2
2 = Unlikely to Qualify	10	4	1	9	10	7	3
3 = Somewhat Unlikely to Qualify	2	2	4	2	4	3	1
4 = Somewhat Likely to Qualify	1	8	6	4	0	5	5
5 = Likely to Qualify	0	3	7	0	0	2	7
6 = Very Likely to Qualify	0	1	2	0	1	0	2
Percentage “correct” responses	95	40	75	80	95	65	70

Note: CS = Case study.

Table D4

Results of Ordinal Regression Analyses

Case Study	group(s)	n	scale	X ²	p	Pseudo R ²	CRTSE		MASQUE	
							Wald X ²	p	Wald X ²	p
1 (Pre)	T + C	40	0-1	0.72	.70	0.03	0.27	.60	0.19	.66
			1-6	1.97	.37	0.05	0.36	.55	1.87	.17
2 (Post)	T	20	0-1	1.69	.43	0.11	1.48	.22	0.54	.46
			1-6	1.53	.47	0.08	1.41	.24	0.08	.78
3 (Post)	T	20	0-1	1.98	.37	0.13	0.50	.48	1.63	.20
			1-6	1.86	.40	0.09	1.57	.21	0.70	.40

Note: T = Treatment Group, C = Comparison Group

Table D5

Correlations between Variables

Variable	1	2	3	4	5	6	7	8
1. Role	-							
2. Experience	.22	-						
3. Fluency	.01	.14	-					
4. Race/Ethnicity	.01	.07	.31	-				
5. Female	.33	-.04	<u>-.50</u>	-.29	-			
6. CRTSE Appraisal	-.14	.04	.23	-.16	-.15	-		
7. CRTSE Expectancy	-.01	.21	-.01	.00	-.04	.36	-	
8. CRTSE Total	-.11	.13	.15	-.11	-.12	<u>.89</u>	<u>.75</u>	-
9. MASQUE Total	-.06	.14	.11	-.21	-.15	<u>.43</u>	.16	.38

Note: N = 40. Correlations in bold face are significant at $\alpha = .05$; underlined correlations are significant at $\alpha = .01$.

Table D6

Summary of Multiple Linear Regression Analyses

Outcome Variable	R^2	Adj R^2	F	p
CRTSE Appraisal	.13	< .01	1.03	.42
CRTSE Expectancy	.05	< .01	0.37	.87
CRTSE Total	.08	< .01	0.63	.68
MASQUE Total	.12	< .01	0.93	.48

Note: Predictor variables in each case were evaluator role, years of experience, fluency in a language other than English, race/ethnicity, and gender.

Table D7

Ordinal Regression Analysis for Evaluator Characteristics Predicting Case Study Ratings

Case Study	group	N	scale	X ²	p	Pseudo R ²	Role		Experience		Fluency	
							Wald X ²	p	Wald X ²	p	Wald X ²	p
1 (Pre)	T + C	40	1-6	2.78	.43	.07	1.20	.27	0.73	.39	0.02	.90
2 (Post)	T	20	1-6	1.04	.79	.05	0.15	.70	0.46	.50	0.02	.90
3 (Post)	T	20	1-6	1.08	.78	.06	0.41	.52	0.83	.36	0.01	.91

Table D8

Chi-square Analyses for Case Study Ratings.

Case Study (Group)	N	Characteristic	Counts		X ²	p	p _{FE}	Cramér's V
			Incorrect	Correct				
1 (Pre-T + C)	40	LSPP or SLP	1	5	0.11	.74	1.00	.05
		Diagnostician	4	30				

		< 5 yrs experience	1	13	2.86	.24	.23	.27
		5-10 yrs	2	4				
		> 10 yrs	2	18				
		Not Fluent	3	30	2.00	.16	.20	.16
		Fluent	2	5				
2	20	LSSP or SLP	0	3	1.90	.17	.52	.31
(Treatment)		Diagnostician	7	10				
		< 5 yrs experience	2	6	0.66	.72	.83	.18
		5-10 yrs	1	1				
		> 10 yrs	4	6				
		Not Fluent	6	10	0.22	.64	1.00	.11
		Fluent	1	3				
3	20	LSSP or SLP	0	3	1.51	.22	.52	.28
(Treatment)		Diagnostician	6	11				
		< 5 yrs experience	3	5	1.07	.59	.50	.23
		5-10 yrs	1	1				
		> 10 yrs	2	8				
		Not Fluent	5	11	0.06	.81	1.00	.06
		Fluent	1	3				

Note: p_{FE} = Fisher's Exact test

APPENDIX E
EXTENDED DISCUSSION

Given the number of ELLs being served in schools and the longstanding patterns of misidentification of these learners and their learning difficulties, the current study served to better understand the role of evaluators' self-efficacy and cultural competence in diagnosis decisions, as well as examine the impact of a language and cultural sensitive evaluation training program (i.e., PEAC³E) on these variables. Specifically, this study investigated the potential relationship between participation in PEAC³E, evaluator background, and levels of self-efficacy and cultural competence among special education evaluators and how these factors influence the eligibility decisions made by these practitioners. A summary of the findings of this study, as well as implications for the field, are provided below.

Summary of Findings

The findings from this review indicate that participation in Project PEAC³E training was related to increased scores on evaluators' reported self-efficacy based on the CRTSE, and add support for the effectiveness of case-based models of professional development. However, similar results were not obtained for cultural competence, as measured by the MASQUE, for which there was not a significant increase in mean scores for the post-treatment administration. This suggests that cultural competence may not be improved or changed through the effects of the Project PEAC³E training. Thus, cultural competence may be an enduring state trait that reflects patterned thinking over long periods of time and requires more prolonged exposure to impact change, while evaluator self-efficacy may be more malleable and sensitive to new learning related to evaluating culturally diverse student populations.

It should be noted that the post-treatment internal consistency reliability of the MASQUE was relatively low, only .79, and it is well known that low reliability serves to attenuate effect

sizes, which makes it more difficult to obtain a statistically significant result (Thompson, 2010). Also, the MASQUE contains several reverse-worded items, a characteristic known to negatively influence instrument reliability (Weijters & Baumgartner, 2012). Thus, interpretation of MASQUE results should be tempered with the recognition of the low reliability of the instrument, along with the relatively small sample sizes ($n = 20$ for treatment group; $n = 20$ for the comparison group) in this study.

As an incidental result, a strong the internal consistency reliability (Cronbach's alpha) of the scores for the CRTSE items modified for use in this study with evaluators (rather than teachers) was found, with an estimated alpha of .95 for all 50 items included in the instrument. This finding suggests that others planning investigations into the self-efficacy beliefs of special education evaluators may wish to use the instrument in its modified form in future studies.

In addressing the potential relationship between evaluator characteristics (e.g. evaluator role, years of experience, fluency in languages other than English) and scores on self-efficacy or cultural competence measures. Neither correlation nor multiple regression analyses indicated a relationship between evaluator characteristics and either the CRTSE or the MASQUE. Thus, for the sample in the current study, self-efficacy belief and cultural competence do not appear to be related to evaluator background. Further none of the background, self-efficacy, or cultural competence, measures demonstrated a relationship with evaluator ability to correctly classify case studies describing students with learning deficits related to linguistic or true learning disabilities.

Study Limitations

The purpose of this study was to provide information regarding evaluator self-efficacy for

conducting culturally competent evaluations. While the study provides valuable information regarding evaluator knowledge, there are several limitations to this research. The first limitation is the convenience sample employed and the manner in which the survey was distributed. Surveys were sent via email to participants. While efforts were made to obtain a broad range of evaluator representation in the field, some evaluators did not choose to participate in the survey. Indeed, only half of the potential treatment group participants receiving Project PEAC³E training completed all pre and post-treatment components of the survey, and only one-third of the potential comparison group participants responded fully to the survey request. Thus, the survey results include inherent response bias toward those evaluators willing to participate or those having strong opinions about the content of the study. It is unknown as to how the inclusion of all special education evaluators in the treatment and control districts may have influenced the outcomes of the study. Therefore, results of the questionnaire may not reflect the beliefs of the evaluators of special education as a whole, and caution should be exercised if generalizations to the larger population of evaluators are considered.

Another limitation that introduces potential bias into the results is the extensive length of the survey and case studies activities. Control group respondents were required to provide background information, respond to 50 items on the CRTSE and 18 items on the MASQUE, and then review sets of documents for three different case study determinations. The treatment group participants were required to provide an additional set of responses for the CRTSE and MASQUE as the post-treatment evaluation. Given the length of the survey, it is possible that respondents did not take the time to answer questions honestly, and made attempts to finish quickly, thereby adding additional error to instrument scores and inaccurate decisions on case studies.

Another study limitation was the presence of insufficient sample sizes, due to attrition, which may have resulted in the lack of adequate power to detect effects. For example, use of multiple regression with five predictor variables of evaluator characteristics (role, years' experience, etc.) with a sample size of $n = 40$ and an alpha probability of .05, has a power of only 0.33 to detect a small effect size of $R^2 = .12$ (Faul, et al., 2007). Future examinations of these variables with a larger sample might prove more informative.

In addition, during the online administration of the CRTSE to treatment and control groups, two items were inadvertently omitted from the instrument for some participants. Thus, these items were removed from the analysis, leaving 50 total CRTSE items. The omitted items included (1) *I am able to obtain appropriate evaluation tools for evaluating students*, and (36) *Revising instructional material to include a better representation of the students' cultural group will foster positive self-images*. Each item was rated on a 0 to 10 on a Likert-type scale.

Furthermore, although best practices for professional learning suggest that effective training requires at least 20 hours, the six hours of training provided may not have been sufficient to impact measurable changes in attitudes toward cultural competence and use of effective culturally-sensitive practices in evaluation placement. Additional training and on-the-job practice may be required to further enhance skills and thought processes necessary to exact change in approaches to special education evaluation.

Comparison group participants from District 1 may also have been swayed by the fact that at the time of this study, the researcher was employed by the district and served as a supervisor for several of the evaluators. This prior relationship possibly influenced the level of knowledge of culturally sensitive practices of those evaluators participating in the survey. Further, prior to this study, the treatment group district, as well as comparison group participants

from District 2, did not have training on ELLs in the prior three years. However, comparison group participants from District 1 participated in at least 4 hours of professional learning provided by the researcher specific to evaluating second language learners. Finally, differences in the demographic makeup of the treatment and control groups may have also influenced the results of the survey. There is a greater proportion of ELL students in the treatment group district (26.4%) and the control group from District 1 (18.5%), as compared to the percentage in control group District 2 (8.5%). Such a difference in student demographics between districts may influence survey results, as those participants with higher proportions of ELL students likely have more experience in evaluating ELLs than those in districts with fewer ELL students.

Conclusion

English learners represent one of the fastest growing groups of school-aged students in the United States (Artiles, Harry, Reschly, & Chinn, 2002; Artiles, Kozleski, Trent, Osher, & Ortiz, 2010; Ford, 2012; Zhang & Katsiyannis, 2002; Skiba, Simmons, & Ritter, 2008) and represents more than 400 languages, with approximately 80% speaking Spanish (U.S. Department of Education, 2008). Disproportionate representation of ELLs in special education has been a major concern for nearly 40 years and, unfortunately, continues to plague our educational system today. Ethnicity and race are significant predictors of placement in special education programs (Butterfield & Read, 2011; Skiba, Knesting, & Bush, 2002). School district evaluation staff often struggle not only with finding appropriate tools normed and designed for use with ELLs. Also, these professional also lack the necessary training and knowledge needed to discern between actual learning disability and a language difference (Butterfield & Read, 2011), resulting in a disproportionate representation of ELLs in special education.

A deeper understanding of the relationship between self-efficacy and cultural competence will provide valuable insights for evaluation practitioners on how to conduct culturally competent assessments of ELLs, to reduce the disproportionate representation of these students in special education. Professional learning emphasizing cultural sensitivity should occur consistently and on an ongoing basis to increase the cultural competence of evaluation staff.

Given that there has only been one other study such as this one in the past three years, the findings from this research study offers some encouraging news. Use of the adapted CRTSE for evaluation professionals could assist school districts with assessing evaluator cultural competence and self-efficacy of their evaluation staff. The results of such a survey could substantiate the need for training in culturally competent practices. Training such as Project PEAC³E provides a framework for school districts and evaluators to use when evaluating ELLs. Furthermore, implementation of evidence-based professional development focused on case-based studies and active audience participation, such as Project PEAC³E, appear to have promise in improving evaluator's self-efficacy in evaluating and determine the eligibility of ELLs for special education. One of the greatest challenges, however, is time. Evaluators, like teachers, not only need professional development focusing on culturally competent evaluations, but also need the necessary timeframe to participate in such training in a way that is not only useful but meaningful to their practice.

Implementation of evidence-based professional development such as Project PEAC³E focused on case-based studies and active participation appears to have promise in improving evaluator self-efficacy in evaluating and determining the eligibility of ELLs for special education. This type of training, used in conjunction with the modified version of the CRTSE could improve the cultural competence of evaluators over time. Use of this kind of training

module can be extended from evaluation staff to teachers in an attempt to assist teachers in discerning the difference between cultural and linguistic differences and truly disabilities. It is hoped that this study will have the long-term effect of decreasing the number of ELL students inappropriately referred, evaluated and placed in special education.

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