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School Psychologist Perceptions Regarding Implementation of Response to Intervention with English Language Learners

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SCHOOL PSYCHOLOGIST PERCEPTIONS REGARDING IMPLEMENTATION OF
RESPONSE TO INTERVENTION WITH ENGLISH LANGUAGE LEARNERS

by

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ABSTRACT

This research was an investigation of three domains identified through a thorough review of the literature as fundamental to the equitable implementation of Response to Intervention (RtI) with English language learners (ELLs): (1) degree of intercultural sensitivity of educators involved in the RtI process, (2) training of educators in implementation of RtI with ELLs, and (3) educator familiarity with empirically-based interventions for use with ELLs. The validity of using RtI with ELLs has been questioned by both supporters and detractors of the model (Linan-Thompson & Ortiz, 2009). The most fundamental tenets of RtI are predicated upon the use of empirically validated interventions and the application of culturally responsive educational practices that provide equitable learning opportunities for all students.

Due to the critical role of school psychologists in the development and implementation of RtI models, a questionnaire was designed for use with this population to explore the three domains delineated above. The Intercultural Sensitivity Scale (ISS; Chen & Starosta, 2000) was used to document participants' degree of intercultural sensitivity. Additional questions addressing domains two and three strategically juxtaposed participants' experiences with and perceptions regarding RtI with native English speakers versus RtI with ELLs.

Through a series of eight research questions and the associated analyses, the following conclusions were reached: (1) Statistically significantly higher mean scores on the ISS were present among those respondents who identified themselves as Hispanic/Latino/Spanish and/or fluent in more than one language; (2) Statistically significant differences were documented in participants' responses to items focused on perceptions of training for implementing RtI with native English speakers versus training for implementing RtI with ELLs; and (3) Statistically

significant differences were found in participants' responses to items inquiring about perceptions of familiarity with empirically-based interventions for use within an RtI framework with native English speakers in comparison to ELLs. Taken together, and in conjunction with a qualitative analysis of two open-ended questions, these results suggest the presence of considerable delays in school psychologists' training and perceptions of preparedness to implement RtI with a linguistically diverse population as compared to native English speakers. This outcome is disconcerting, given the emphasis throughout the literature on the importance of unique considerations required to implement RtI equitably with ELLs. Recommendations for practice and future research are provided that emphasize the need for additional research and training in implementing RtI with a linguistically diverse population.

"You are the bows from which your children
as living arrows are sent forth." -Khalil Gibran

For my parents,
the bows that have enabled me to reach higher and further,
loving me, guiding me, and supporting me
without limit.

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LIST OF ACRONYMS

ELL   English Language Learner

ESOL   English for Speakers of Other Languages

FASP   Florida Association of School Psychologists

ISS   Intercultural Sensitivity Scale

RtI   Response to Intervention

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CHAPTER 1: INTRODUCTION

Introduction

In recent years, "Response to Intervention" (RtI), defined both as a general and special education initiative focused on continued closing of the achievement gap (Fuchs & Fuchs, 2006a), have become some of the most common "buzz words" in educational circles. RtI entails providing high quality instruction and intervention to all students, systematic assessment of students' rates of academic growth as a result of instruction and intervention, and the use of both formative and summative evaluation of learning gains to guide instructional decision-making (Grimes, 2005). Due in large part to recent legislative changes, large-scale implementation of RtI is evident at the district, state, and national levels. Despite these implementation efforts, many concerns exist with respect to the valid use of RtI with diverse populations (Brown & Doolittle, 2008a; Haagar, 2007; Linan-Thompson & Ortiz, 2009; Xu & Drame, 2007).

A growing body of research is comprehensively documenting RtI implementation efforts and procedures with native English speakers, including investigations of interventions used within this framework as well as school psychologists' RtI training and implementation experiences (Bursuck & Blanks, 2010; Machek & Nelson, 2010). Problematically, however, research *particularly* focused on RtI with English language learners (ELLs), on interventions specifically designed for this population, and on the experiences and preparedness of educators, including school psychologists, in implementing RtI with ELLs is much more limited (Linan-Thompson, Cirino, & Vaughn, 2007; Klingner & Edwards, 2006; Vanderwood, Linklater, & Healy, 2008). In the absence of such research and guidance, the implementation of RtI with

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ELLs runs the risk of violating the very tenets of RtI that call for the use of "scientifically based interventions" and equal access to learning experiences (National Association of State Directors of Special Education, Inc. & Council of Administrators of Special Education, 2006) in working with students.

Given the burgeoning population of English language learners in U.S. schools (Rhodes, Ochoa, & Ortiz, 2005; Florida Department of Education, 2007), it is incumbent upon educational researchers to begin investigating areas related to the implementation of RtI with ELLs, including but not limited to research on variables that are key in effectively and equitably implementing RtI with ELLs. Without such research, use of RtI with ELLs runs the risk of becoming "one more discriminatory system" (Brown & Doolittle, 2008a, p. 67).

Purpose of the Study

Through a review of the literature associated with this topic, three primary and fundamental areas that are critical to the equitable and effective implementation of RtI with ELLs have been identified: (1) degree of intercultural sensitivity of educators involved in the RtI process, (2) training of educators in RtI implementation with ELLs, and (3) educator familiarity with empirically-based interventions to be used as part of RtI with ELLs. The conclusions of numerous investigations regarding the use of RtI with ELLs (e.g., Brown & Doolittle, 2008a; Brown & Doolittle, 2008b; Klingner & Edwards, 2006; Linan-Thompson et al., 2007; Vanderwood et al., 2008) support the need to further investigate these three essential domains.

Historically, school psychologists have played a key role in the evaluation process for special education eligibility determination (Canter, 2006). The passage of Individuals with

Disabilities Education Improvement Act (IDEIA) 2004 precipitated considerable change in the

procedures and mechanisms by which students may be found to be eligible for special education

services (Canter, 2006; Haager, Calhood, & Linan-Thompson, 2007). Prior to the passage of

IDEIA 2004, legislation related to special education eligibility required documenting whether a

"severe discrepancy between achievement and intellectual ability" (Canter, 2006, p. 1) was

present. School psychologists were vital in this determination process because their training and

expertise enables them to administer and interpret measures of both academic and cognitive

functioning (Canter, 2006).

Following the passage of IDEIA 2004, states may no longer require the use of this

discrepancy criteria (Haager, 2007), and eligibility may be determined by examining a child's

responsiveness to interventions (Haager et al., 2007; Lembke, Garman, Deno, & Stecker, 2010).

Such changes to eligibility determination "have significant implications for the role of the school

psychologist" (Canter, 2006, p. 1). As schools begin to implement RtI, new and expanded roles

for school psychologists have developed, and in many locations, school psychologists have been

critical members of teams that have spear-headed RtI implementation efforts (Reschly, D. et al.,

2000; Sullivan & Long, 2010). School psychologists' expertise in areas related to special

education policy, mental health, school-based/team collaboration, and consultative practices

positions them to be vital contributors to the establishment of RtI models (National Association

of School Psychologists, 2006; Sullivan & Long, 2010). According to the National Association

of School Psychologists, the new and expanded role of the school psychologist will involve

efforts in the areas of RtI system design, RtI implementation efforts, and continued but expanded

student-level services (2006). Such student-level services within the RtI model will include but

are not limited to consultation regarding and implementation of early intervention, training of teachers in and implementation of progress-monitoring strategies, and observation of students in natural environments to identify critical learning factors (NASP, 2006).

School psychologists are actively called into a role that emphasizes the academic well-being of all students through the design, implementation, and evaluation of RtI programs (Bursuck & Blanks, 2010). Because of the involvement of many school psychologists and the discipline of school psychology as a whole in RtI implementation efforts, this population warrants considerable attention with respect to research regarding RtI implementation, particularly as it relates to ELLs (Sullivan & Long, 2010). Through research with this population, the continued professional learning needs of school psychologists and of the discipline can be more readily identified (Sullivan & Long, 2010).

The primary purpose of this study was to conduct exploratory research with a sample of school psychologists into the three domains identified as fundamental in implementing RtI with ELLs (degree of intercultural sensitivity of educators involved in the RtI process, training in RtI implementation with ELLs, and experience with empirically-based interventions to be used as part of RtI with ELLs). Through a questionnaire developed as part of the current dissertation, these three domains were explored by obtaining data regarding school psychologists' level of intercultural sensitivity as measured with the Intercultural Sensitivity Scale (ISS) (Chen & Starosta, 2000), their experiences and perceptions related to both graduate and post-graduate training regarding using RtI with native English speakers and ELLs, and their perceptions of familiarity with empirically-based interventions intended for use within an RtI framework with native English speakers and with ELLs.

The findings of this investigation, presented and discussed in Chapters Four and Five, have helped to determine whether differential levels of training and perceived preparedness are present in school psychologists' questionnaire responses regarding training and interventions for RtI with native English speakers compared to ELLs. In the presence of differential levels of preparedness and varying or limited levels of intercultural sensitivity, caution is warranted in implementing RtI with ELLs due to the high-stakes exceptional education eligibility decisions that will be based, at least in part, on students' "responsiveness to interventions." In the absence of an equitable educational foundation, the implementation of RtI with ELLs may violate the underlying principles of this initiative that require the assurance that all students be given an appropriate opportunity to learn. This study adds to the existing but limited body of research regarding the use of RtI with ELLs.

Research Questions

The following research questions were posed in an effort to explore the identified areas of intercultural sensitivity, graduate and post-graduate training experiences and perceptions of these experiences, and perceptions related to the use of interventions within RtI. The reader is encouraged to reference the questionnaire for further clarification of specific questionnaire items (Appendix G).

Intercultural Sensitivity – Items 53-76

1. What is the degree of intercultural sensitivity of school psychologists surveyed, as measured by the total score on the ISS?

o Are there differences in degree of intercultural sensitivity (total score) based upon demographic variables (gender, number of years as a school psychologist, highest degree completed, reported status as Hispanic/Latino/Spanish, reported ethnic category, linguistic fluency, and primary place of employment)?

2. Do the data from the ISS as used in the current study confirm the five-factor structure identified by the authors of the ISS?

Graduate Level Training – Items 1-19

3. What proportion of school psychologists surveyed report having received graduate-level training in the areas addressed on the questionnaire [culture, cultural sensitivity, and cultural bias; RtI implementation; empirically-based interventions for use with RtI; second language learning; and English for Speakers of Other Languages (ESOL) programming] (items 1-9)?

    o Are any notable differences present between responses to items that juxtapose training for implementation of RtI as a whole versus RtI with ELLs (items 4/5 and 6/7)?

4. What are school psychologists' perceptions about the impact of their graduate training on the areas addressed on the questionnaire (culture, cultural sensitivity, and cultural bias; RtI implementation; empirically-based interventions for use with RtI; second language learning; and ESOL programming) (items 10-19)?

- Are any notable differences present between responses to paired items that specifically juxtapose perceptions related to training experiences on RtI with native English speakers versus ELLs (items 14/15 and 16/17)?

Post-Graduate Level Training – Items 20-38

5. What proportion of school psychologists surveyed report having received post-graduate training in the areas addressed on the questionnaire (culture, cultural sensitivity, and cultural bias; RtI implementation; empirically-based interventions for use with RtI; second language learning; and ESOL programming) (items 20-28)?
    - Are any notable differences present between responses to items that juxtapose training for implementation of RtI as a whole versus RtI with ELLs (items 23/24 and 25/26)?
6. What are school psychologists' perceptions about the impact of their post-graduate training experiences on the areas addressed on the questionnaire (culture, cultural sensitivity, and cultural bias; RtI implementation; empirically-based interventions for use with RtI; second language learning; and ESOL programming) (items 29-38)?
    - Are any notable differences present between responses to paired items that specifically juxtapose perceptions related to training experiences on RtI with native English speakers versus ELLs (items 33/34 and 35/36)?

Perceived Knowledge of Empirical Interventions and Research Analysis – Items 39-52

7. To what degree do respondents report being confident in the areas addressed on the questionnaire that relate to knowledge of, experience with, and implementation of interventions within an RtI framework (items 39-50)?

   o Are any notable differences present between responses to paired items that specifically juxtapose perceptions related to training experiences on RtI with native English speakers versus ELLs (items 41/42, 43/44, 47/48, 49/50)?

8. What themes, ideas, and patterns are noted in participants' free responses to two items asking them to provide examples of academic interventions for use with native English speakers and with ELLs (items 51 and 52)?

The unifying research inquiry that connects each of the previous research questions is the attempt to determine if school psychologists report differential levels of training and perceived preparedness for implementing RtI with ELLs as compared to native English speakers.

Hypotheses

Intercultural sensitivity – Items 53-76

1. Since no studies using the ISS with school psychologists are currently available for comparison purposes, it is hypothesized that the mean total score on the ISS for respondents will be similar to the mean total score identified by West (2009) in her work with school-based guidance counselors (mean 103.5 and standard deviation 8.2).

o It is hypothesized that the mean ISS score will be statistically significantly higher based upon demographic items that address status as Hispanic/Latino/Spanish, ethnicity, and fluency in more than one language.

2. It is hypothesized that the current study will confirm Chen & Starosta's (2000) five-factor structure (as referenced on page 69).

Graduate Level Training – Items 1-19

3. It is hypothesized that the proportion of school psychologists reporting graduate-level training in the areas identified will be variable (items 1-9).

    o It is hypothesized that a greater number of participants will report training for implementation of RtI in general versus RtI with ELLs (items 4/5 and 6/7).

4. It is hypothesized that school psychologists' perceptions about the impact of their graduate training on the identified areas will be variable (items 10-19).

    o It is hypothesized that the mean response on items related to implementation of RtI with native English speakers will be statistically significantly higher than for those items related to ELLs (items 14/15 and 16/17).

Post-Graduate Level Training – Items 20-38

5. It is hypothesized that the proportion of school psychologists reporting post-graduate level training in the areas identified will be variable (items 20-28).

    o It is hypothesized that a greater number of participants will report training for implementation of RtI in general versus RtI with ELLs (items 23/24 and 25/26).

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6. It is hypothesized that school psychologists' perceptions about the impact of their post-graduate training on the identified areas will be variable (items 29-38).

   o It is hypothesized that the mean response on items related to implementation of RtI with native English speakers will be statistically significantly higher than for those items related to ELLs (items 33/34 and 35/36).

Perceived Knowledge of Empirical Interventions and Research Analysis – Items 39-52

7. It is hypothesized that school psychologists' perceptions of confidence in the areas identified will be variable (items 39-50).

   o It is hypothesized that the mean response on items related to implementation of RtI with native English speakers will be statistically significantly higher than for those items related to ELLs (items 41/42, 43/44, 47/48, 49/50).

8. On the free response items, it is hypothesized that respondents will more readily provide interventions for use with native English speakers, that the same interventions will be suggested for use with both native English speakers and ELLs, and that respondents may provide additional comments that shed light on the status of RtI implementation with these two populations within their work locations.

Methodology

This exploratory research study is an investigation regarding participants' experiences and perceptions related to implementing RtI both with English language learners and native English speakers through a questionnaire developed as part of this investigation. The

questionnaire specifically addresses the three areas identified through the literature as key elements of crafting and implementing an equitable RtI model. Data were collected related to participants' degree of intercultural sensitivity as measured by the ISS, training experiences and their perceptions of these experiences both at the graduate and post-graduate level, and perceptions regarding empirical interventions and research analysis. In addition, data regarding demographic variables were collected.

The researcher specifically addressed the research questions delineated above through analysis of participants' responses on questionnaire items. If participants' responses indicated differential levels of perceived preparation and training to implement RtI with ELLs versus native English speakers, limited or under-developed intercultural sensitivity, and differential levels of perceived knowledge and experience with interventions for ELLs versus native English speakers, then the cautions of numerous researchers and authors in moving forward with RtI for ELLs can be supported. On the other hand, if participants' responses indicated perceptions of equal degrees of preparation and training, highly developed intercultural sensitivity, and perceptions of equivalent levels of knowledge and experience with empirical interventions, then support for moving forward with large-scale implementation of RtI with ELLs can be posited. The results of these findings and their implications are discussed fully in Chapters Four and Five.

Participants

The population sampled through this investigation was members of the Florida Association of School Psychologists (FASP). An appropriate sample size was calculated, and a simple random sampling was utilized. Participation in the study was voluntary and anonymous.

Instrumentation

With the exception of the 24 items of the ISS (Chen & Starosta, 2000), all of the items on the questionnaire were developed by the author as part of the current investigation. The questionnaire is composed of 83 total items, divided into five individual sections: (1) Graduate Training, (2) Post-Graduate Training, (3) Interventions, (4) Cultural Experiences, and (5) Demographics. The final questionnaire includes changes suggested through the feedback of the investigator's committee, which included a school psychologist, as well as a review by a non-committee education professional. The independent variables included gender, years of experience as a school psychologist, highest degree completed, ethnicity, linguistic fluency, and primary place of employment. The dependent variables were the responses to the 83 items.

Procedures

Data Collection

The data collection process for this study was coordinated by the investigator. Subsequent to approval from FASP's Research Committee, permission was granted to access FASP's membership database. Based upon the number of FASP members willing to be contacted for research purposes (N=1,273), it was determined that a sample size of 130 participants would be needed. (See Method Section for mathematical analysis.) The original sample of 130 FASP members yielded a response rate of 54% (71 responses). A second simple random sample of 200 participants was selected in an effort to obtain the necessary sample size; the second sample yielded a response rate of 38% (76 responses). A total of 148 of 330

questionnaires were returned, yielding an overall response rate of nearly 45%. The Tailored

Design Method (Dillman, Smyth, & Christian, 2009) was utilized to maximize the response rate.

Responses were anonymous. (See Method Section for additional information.)

Data Analysis

All calculations were performed using SPSS 17.0, a computer-based statistical software

program. Frequencies and descriptive statistics were calculated, independent samples *t* tests and

one-way Analyses of Variance (ANOVAs) were conducted. Additionally, principal components

factor analysis and repeated-measures Analysis of Variances (ANOVAs) were utilized, each as

deemed appropriate to answer the research questions. Specific information on data analyses for

each research question can be found in Chapter 3.

<center>**Significance of the Study**</center>

Although other researchers have sought to investigate the experiences of school

psychologists with RtI through survey research (e.g., Machek & Nelson, 2010; Sullivan & Long,

2010; Cangelosi, 2009; Larson, 2008), a comprehensive review of the literature, including

dissertations, did not yield survey-based investigations that focused specifically on the

experiences and perceptions of school psychologists in the three key areas identified as part of

this research study. As such, the current investigation appears to be the first of its kind in

measuring these three essential domains and in possibly identifying differential levels of

perceived preparedness among school psychologists in implementing RtI with native English

speakers and with ELLs. If differential levels of preparedness are documented, this research may

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provide support for the conclusions of other authors and researchers (e.g., Fuchs, Mock, Morgan, & Young, 2003; Fuchs & Fuchs, 2006b; Ten Regional Title IV Equity Assistance Centers, 2008; Orosco & Klingner, 2010) that the implementation of RtI with ELLs should take place judiciously and only after careful consideration of those key elements that differentiate it from the implementation of RtI with native English speakers.   This study is a response to the "call to research" in this area by investigating specific attributes and knowledge among school psychologists that are critical to equitable implementation of RtI: intercultural sensitivity, knowledge regarding RtI specifically with ELLs, and knowledge regarding interventions for use with ELLs within an RtI framework. This study helps identify whether school psychologists need additional training in these areas.

Additionally, the current research extends the work of Chen and Starosta (2000) by expanding the populations with which the ISS has been investigated. The current researcher conducted an extensive review of measures of intercultural sensitivity, finding no single measure specifically designed for use with school psychologists. The use of the ISS as part of the current investigation appears to constitute the first use of this instrument with school psychologists.

The results of this research can influence the theoretical foundations of RtI, which call for equal access to effective general education curricula for all students and to interventions empirically validated upon those populations with whom they are utilized. If the most basic of RtI's tenets are not currently being met due to inequitable levels of training and preparedness and limited intercultural sensitivity among educators uniquely tied to the implementation of RtI (such as school psychologists), use of RtI with ELLs risks violating its very own principles and possibly producing even greater disparities between the educational outcomes of native English

speakers and English language learners. According to the Ten Regional Title IV Equity Assistance Centers' RtI Issues Paper,

> It is unreasonable to expect that an innovation such as Response to Intervention will reach its desired outcome by simply being superimposed on an education system that has produced disproportionate representation of minorities, linguistically different, and low-income learners in special education (Ten Regional Title IV Equity Assistance Centers, 2008, p. 1).

The results of this research provide concrete and practical guidelines to enhance the practice of school psychology. By documenting school psychologists' experiences and perceptions, areas in need of development and training can be identified. Specific recommendations can be made to universities, districts, and state and national organizations with respect to the areas related to RtI that may be in need of additional focus. The results of this survey can also serve as the preliminary portion of a future experimental study that could investigate the impact of specific training programs (in intercultural sensitivity, empirically validated interventions for use with ELLs, etc.) regarding knowledge and perceptions related to the implementation of RtI with ELLs. Thus, the outcomes of this research can contribute to both the theory and practice of RtI as well as guide future research endeavors.

Delimitations of the Study

The following are pertinent delimitations of the current investigation:

1. The objective of this study is to investigate the responses of school psychologists in the sample on items that explore three areas identified by this researcher as critical in

the equitable implementation of RtI with ELLs: (1) intercultural sensitivity, (2) training in RtI with ELLs and native English speakers, and (3) familiarity with empirical interventions for use with these populations.

2. Research questions were developed to obtain data from the sample on the three areas delineated previously and to identify any relationships between demographic variables and participant responses.

3. Due to the size of the population of interest, survey research was identified as the best method for obtaining the desired data from a population that would otherwise be too large to observe directly.

4. Given that the focus of this research is upon the perceptions and experiences of individuals, the use of survey research as a method of measuring opinions and attitudes is considered appropriate (Dillman, Smyth, & Christian, 2009).

Limitations of the Study

The following are limitations of the current investigation:

1. The investigation is dependent upon the return of the completed questionnaire. It is possible that those individuals in the sample who do not return the questionnaire have experiences that are different from those who do return the questionnaire.

2. The conclusions drawn from the results are limited in their generalizability beyond school psychologists that are members of the Florida Association of School Psychologists (FASP). Additionally, not all FASP members have granted permission to provide their contact information for research purposes. As such, the results may

have limited applicability to the profession of school psychology on a national level, to those school psychologists who are not members of FASP, or to school psychologists that are members of FASP and who have chosen to exclude their contact information from the FASP database.

3. Because portions of the questionnaire ask respondents for perceptions of their own levels of experience and preparedness, it is possible that participants may respond in what they consider to be a more socially desirable manner (portraying themselves in a more favorable light). If a participant responds in such a manner, results may not be an accurate reflection of the participant's true experiences and perceptions, thereby impacting the aim of the current study to gauge the *actual* perceptions and experiences of respondents.

4. Due to the fact that the majority of the items that compose the questionnaire that is used are newly developed questions (with the exception of the 24-item Intercultural Sensitivity Scale), no previous research is available to document the validity and reliability of the instrument as a whole or of individual items.

5. A total score for the questionnaire cannot be obtained based upon the current design of the instrument. This issue is addressed through suggestions for future research.

CHAPTER 2: REVIEW OF THE LITERATURE

Response to Intervention (RtI) is at the forefront of local, state, and national initiatives in the field of education, and proponents of RtI believe that it holds promise in enhancing the educational experiences and performance of the general population of U.S. students. The purpose of this literature review is multi-faceted and directly relevant to the burgeoning population of English language learners (ELLs) in the U.S. school system. The first portion of this chapter provides critical information regarding the development of, rationale for, and implementation of RtI. The second portion builds upon the first, focusing specifically on the use of RtI with ELLs, on what differentiates RtI with native English speakers from use with ELLs, and on specific recommendations for equitable and appropriate implementation of RtI with ELLs.

RtI: Development, Rationale, and Implementation

RtI: Basic Definition and Rise in Popularity

RtI entails providing research-based, high quality instruction and intervention to all students, systematic assessment of students' rates of academic growth as a result of instruction and intervention, and the use of both formative and summative evaluation of learning gains to guide instructional decision-making (Grimes, 2005). The central concepts of the RtI approach require the implementation of scientific, research-based interventions in general education (National Joint Committee on Learning Disabilities, 2005). According to Fuchs (2005), RtI is best described as an approach and not as a single model, since there are many variations of its

core components. At the heart of all variations of RtI is the encouragement of sustained and serious early intervention for all students with the intention of fostering stronger student performance in general education and thereby reducing referrals to special education (Fuchs & Young, 2006). Monitoring of student performance within a framework of "scientific" interventions is purported to provide students with early intervention that is more timely and effective and to provide a means of assessing learner needs (Fuchs & Fuchs, 2006a; National Joint Committee on Learning Disabilities, 2005). RtI, then, is intended to serve as "an intervention delivery system that is provided for all children" (Xu & Drame, 2007, p. 306).

The National Joint Committee on Learning Disabilities (NJCLD, 2005) has identified three major educational developments that have led to the "rise of RtI." One critical component has been the long-standing push away from the traditional ability-achievement discrepancy model that has been used for special education eligibility purposes and the emphasis on the need to develop alternative mechanisms for accurately identifying students with learning disabilities. Several concerns have been raised over the years with respect to the traditional discrepancy model (Linan-Thompson & Ortiz, 2009).

First, multidisciplinary teams often fail to explore critical factors that may lead to learning difficulties, such as lack of effective instruction and second language learning, as documented in the Exclusionary Clause of the Individuals with Disabilities Education Improvement Act (IDEIA 2004) (Linan-Thompson & Ortiz, 2009). The purpose of the Exclusionary Clause is to help ensure that learning difficulties due to factors such as sensory deficits, emotional disabilities, mental retardation, environmental or economic disadvantage, and cultural and linguistic factors are not inappropriately identified as learning disabilities (National

Association of School Psychologists, 2005). Second, due to limited documentation of pre-referral intervention outcomes, interpretation of student performance can be difficult (Linan-Thompson & Ortiz, 2009). Additionally, interventions implemented may not be specific to the areas of identified need, and in the end, interventions may be minimized in favor of referral for evaluation, even when students appear to be making gains within the general education classroom (Linan-Thompson & Ortiz, 2009). Due to its use of a variety of measures as well as early, sustained intervention, RtI directly addresses each of these concerns (Linan-Thompson & Ortiz, 2009; Orosco & Klingner, 2010). The use of RtI as a preventative measure counters dissatisfaction with the traditional IQ-achievement discrepancy that has proven ineffective in differentiating between those students with true disabilities and other groups of students whose academic performance is not at expectancy (Linan-Thompson, Cirino, & Vaughn, 2007). Through RtI, as opposed to the discrepancy model, assistance within general education can be provided to students as soon as an academic problem is identified; individualized instruction can be provided to students who have been inadequately instructed but are not necessarily disabled; and students do not need to be "labeled" to receive adequate and sustained academic support (Orosco & Klingner, 2010). Early intervention is considered a key difference between the traditional discrepancy model and the RtI approach (Xu & Drame, 2007).

A second factor influencing the increased popularity of RtI arises from the failure of special education to serve its students adequately and the presence of non-disabled (but academically struggling) students in special education (National Joint Committee on Learning Disabilities, 2005). RtI has been proposed as a method for reducing inappropriate referrals to and placements in special education through the assumption that "when provided with quality

instruction and remedial services, a student without disabilities will make satisfactory progress" (NJCLD, 2005, p.1). Within the RtI framework, high quality instruction is delivered to all students in general education (Xu & Drame, 2007). As such, RtI may be able to reduce the possibility that "curriculum casualties," students who have not been appropriately instructed within the general education setting, will erroneously be identified as students with disabilities (Garcia, 2009).

The third major reason cited by the National Joint Committee on Learning Disabilities (2005) for the recent interest in RtI emerged from research on reading difficulties indicating that early identification and sustained prevention programs can reduce later reading problems. Such early intervention can promote a reduction in inappropriate placements into special education.

The passage of the IDEIA (2004) further focused attention on RtI as a tool for assessment of and intervention with students (National Association of State Directors of Special Education & Council of Administrators of Special Education, 2006). Major changes in the law have legitimized interest in RtI as both a general education initiative and as an alternative means for eligibility for special education services through the implementation of research-based interventions. These recent legislative changes have heralded a race to establish RtI models in schools (Haager, Calhood, & Linan-Thompson, 2007). According to the reauthorization, states must "allow local education agencies (LEAs) to use RtI procedures for (a) determining if a child has a specific learning disability, (b) determining eligibility to receive special education, and (c) as a process of examining the child's responsiveness to" intervention (Haager et al., 2007, p. 151). That is, states may no longer require the use of the discrepancy criteria (Haager, 2007), and up to 15% of allocated funds may be used for early intervention services implemented as

part of an RtI model (Xu & Drame, 2007). If RtI procedures are used for exceptional education services eligibility, the law requires documentation of the instructional strategies and interventions implemented as well as student-centered data collected through the course of the intervention (Haager et al., 2007).

Individual states and school districts have developed specific guidance and procedures regarding utilizing RtI as the eligibility mechanism for exceptional student education services. The state of Florida, for example, encourages the use of three guiding questions in employing RtI for eligibility purposes (Florida Department of Education, 2006). Each of these questions reflects the importance of implementing evidence-based interventions and collecting student data. First, teams must determine if an individual student displays significant discrepancies in performance when compared to typical peers or benchmarks for a given grade (Florida Department of Education, 2006). Second, teams must determine if, in the presence of high quality, research-based instruction, a student evidences a rate of progress that is insufficient to close the achievement gap with typical peers (Florida Department of Education, 2006). Finally, teams must determine if evidence exists that a student requires long-term, intensive, and specially designed instruction to obtain meaningful educational progress (Florida Department of Education, 2006).

Holistically, then, it is clear that the goals of RtI are to two-fold. First, through the implementation of RtI, educators seek to maximize the learning of all students by integrating and coordinating a multiplicity of evidence-based resources in a concerted effort to minimize the impact of poor learning or behavioral indicators (National Centers of Response to Intervention,

2010). Second, the use of RtI is intended to enhance and strengthen the process of identifying

individual students with disabilities (National Centers on Response to Intervention, 2010).

RtI Models and Implementation

RtI emphasizes early intervention through a multi-tiered approach/framework (Brown &

Doolittle, 2008a; Bursuck & Blanks, 2010). It includes the practice of screening all children and

the provision of support through the use of research-based interventions at various levels along

with frequent progress monitoring (Brown & Dolittle, 2008a). Two distinct variations of RtI are

currently documented in practice (Brown & Dolittle, 2008a; Xu & Drame, 2007).

In the first model, known as the standard treatment protocol approach, all children with

similar academic difficulty in a given area participate in the same empirically validated treatment

(Xu & Drame, 2008), and academic achievement is compared to specific pre-established

benchmarks (Brown & Dolittle, 2008a). The second variation of RtI, known as the problem-

solving model, emerges from the pre-referral intervention system (Brown & Doolittle, 2008).

Within the problem-solving model, student difficulties ("problems") are defined behaviorally

and specific interventions are designed/selected for the targeted student(s) with the goal of

enhancing academic and/or behavioral performance (Brown & Dolittle, 2008a). The impact of

interventions in the problem-solving approach is measured in a natural setting and compared to

peer performance to determine if sufficient progress is being achieved (Xu & Drame, 2007). The

intent of the problem-solving approach is to ensure that empirically validated interventions have

been implemented and evaluated prior to referring a student for a special education evaluation

(Xu & Drame, 2007).

Regardless of which model is implemented, RtI is considered to be a cyclical process composed of various core components (Harris-Murri, King, & Rostenberg, 2006). These characteristic components include high quality instruction in the general education setting, continual progress monitoring of all students, implementation of research-based interventions for those students who are not making expected progress, and a transition into evaluation for exceptional education services for those students who do not respond to interventions (Harris-Murri et al., 2006). All students must be provided adequate opportunities to learn within the general education setting (Xu and Drame, 2007). In summary, then, RtI can be defined as a cyclical process utilizing assessment and intervention to determine a student's ability to benefit from and respond to the research-based instruction delivered within the classroom (Linan-Thompson & Ortiz, 2009).

The majority of school districts have developed and implemented a three-tier problem-solving approach to RtI (Xu & Drame, 2007), such as used in the state of Florida. Across each of the three tiers, a cyclical and fluid series of four questions guides the problem-solving process to ensure a match between the instructional resources and educational needs (Florida Department of Education, 2008). First, the problem is identified by calculating the discrepancy between what is expected and what is actually occurring; "*What is the problem*?" (Florida Department of Education, 2008). For example, a student may have an oral reading fluency of 10 words per minute when 30 words is the expectation; thus, the 20-word discrepancy would be identified as the "problem." Second, the problem is analyzed using data to determine why the discrepancy is present; "*Why is it taking place*?" (Florida Department of Education, 2008). Determining the root cause of the problem may be a complex process that requires assessment of component

skills to identify the student's true deficit and to remediate building block skills as needed. Next, a student performance goal must be established, an intervention plan developed that directly addresses the goal, and a clear progress-monitoring plan established; "*What are we going to do about it*?" (Florida Department of Education, 2008). This third step involves ensuring the integrity of intervention implementation as well. Fourth and finally, the progress-monitoring data are utilized to determine the effectiveness of the intervention based upon the student's response to the plan; "*Is it working*?" (Florida Department of Education, 2008).

It should be noted that as RtI implementation efforts evolve, an integration of Problem Solving/Response to Intervention (PS/RtI) and Positive Behavior Support (PBS) has resulted in a comprehensive framework known as Multi-Tier System of Supports (MTSS) (Kincaid & Batsche, 2011). The shift from "RtI" to "MTSS" facilitates a collaborative and integrated process to better meet both the academic and behavioral needs of students (Kincaid & Batsche, 2011). Although a shift in terminology from RtI to MTSS is in process, the core elements of RtI (e.g., use of a cyclical problem-solving process and a three-tier system of supports) remain the same within the MTSS framework (Kincaid & Batsche, 2011).

A review of critical information related to each tier follows so that a comprehensive understanding of RtI can be developed. These tiers are designed to exist as a continuum that is fluid, connected, and dynamic (Florida Department of Education, 2008).

Tier 1. Tier 1 is often referred to as "universal prevention" (Sullivan & Long, 2010). At Tier 1, high quality and research-based instruction and behavioral support provided within the general education setting are coupled with consistent progress monitoring of the academic growth of all students (Xu & Drame, 2007; Sullivan & Long, 2010). Tier 1 represents students

who exhibit academic health and progress based upon their learning in the core curriculum (Tilly, 2008). Student performance data gathered through progress monitoring at Tier 1 is analyzed and compared to student data from other classes, schools, districts, and perhaps even nationally (Tilly, 2008). The primary emphasis at Tier 1 is to ensure that an effective instructional program is being implemented with fidelity to permit comparison of student data with the goal of ruling out the possibility that inadequate instruction is the cause of any student underachievement (Xu & Drame, 2007). An effective core curriculum will yield approximately 80% of students functioning at proficiency (Tilly, 2008).

Tier 2. The second tier within an RtI model provides intensive, targeted support for those students who did not meet expected benchmarks as a result of Tier 1 instruction and intervention (Klingner & Edwards, 2006). Tier 2 is described as supplemental instruction in addition to the core curriculum, and it is posited that approximately 10-15% of students will require the use of supplemental instruction to achieve proficiency (Tilly, 2008). Students needing Tier 2 intervention demonstrate a rate of progress and performance that is discrepant from and lower than that of their peers (Xu & Drame, 2007; Klingner & Edwards, 2006). It should be noted that a consistently utilized operational definition of what constitutes discrepant performance is still a focus of research within the field of RtI (Compton, Fuchs, Fuchs, & Bryant, 2006; Fuchs & Fuchs, 2006a). Students determined to need Tier 2 intervention will receive more specialized instruction and remediation than those students responding effectively within Tier 1 (Tilly, 2008). This supplemental support can take the form of additional time in the core curriculum, added opportunities to engage in learning activities, strategic and planned additional instruction, and other additions to the core (Tilly, 2008). Supplemental instruction

provided through Tier 2 is still general education instruction; that is, students receiving Tier 2

intervention should not be perceived or assumed to exhibit a disability (Tilly, 2008). Torgesen

(2004, as cited in Tilly, 2008) identified the following components as critical to effective

supplemental instruction: (1) "Supplemental instruction must be explicit;" (2) "Supplemental

instruction must be more intensive than core instruction;" (3) "Supplemental instruction must be

more supportive, both emotionally and cognitively;" and (4) "Supplemental instruction must

include methods for student progress monitoring" (Tilly, 2008, p. 32). It is clear that

supplemental instruction must be provided in addition to core instruction; it is additive, and does

not supplant previous instruction (Tilly, 2008). It is recommended that Tier 2 instruction be

implemented in groups of three to four students for 30-45 minutes daily for approximately ten

weeks (Tilly, 2008). Of those students receiving effective Tier 2 intervention, approximately

70% should yield a positive response and demonstrate a rate of progress that will reach

benchmark performance (Florida Department of Education, 2008).

Tier 3. Within Tier 3, a small subset of students will receive intensive instruction outside

of the core curriculum (Tilly, 2008). This subset constitutes approximately 5% of a student body

(Tilly, 2008). Tier 3 is designated for those students who continue to demonstrate a need for

additional intervention beyond Tier 2 (Xu & Drame, 2007). Tier 3 does not equal special

education but can instead be conceptualized as intensive, individualized attention that may be

provided within the general education classroom or in a different setting (Tilly, 2008).

Torgesen's (2004, as cited in Tilly, 2008) characteristics for supplemental instruction can be

applied at Tier 3, but the instruction is generally different in nature and intensity (Tilly, 2008)

and based on individual student needs (Florida Department of Education, 2008).

Example of Tiers 1, 2, & 3 in Reading. The following example is provided in order to further clarify the specific nature of instruction and intervention at each tier. At Tier 1, an evidence-based core reading program would be implemented (Bursuck & Blanks, 2010). All students would be exposed to a 90-minute reading block utilizing the core curriculum and to include both large and small group instruction (Bursuck & Blanks, 2010). At Tier 2, explicit instruction in up to three foundational reading skills would be implemented using evidence-based practices (Bursuck & Blanks, 2010). Tier 2 interventions would be implemented within small groups, three to five times per week, for a total of 20 to 40 minutes of additional instructional time, beyond the 90-minute core, per week (Bursuck & Blanks, 2010). At Tier 3, implemented on a one-to-one basis, highly explicit and scaffolded instruction would be utilized to remediate a targeted and limited set of foundational reading skills (Bursuck & Blanks, 2010). An additional 45-120 minutes of instruction, again, beyond the 90-minute core, per week would be provided through Tier 3 (Bursuck & Blanks, 2010).

Summary of RtI. The three tiers of an RtI model are consistently depicted graphically utilizing a triangle that represents increasingly intense levels of support (Florida Department of Education, 2011a). As the intensity of support increases, the number of students requiring a given level of support decreases. That is, an inverse relationship exists between an increasing level of support and the number of students requiring that level of support to demonstrate academic growth. Table 1 and Figure 1 are provided as a summary of the information presented above of Tiers 1, 2, and 3 within an RtI model.

Table 1: *Summary of Tiers within an RtI Model*

Tier	Description
Tier 1	A high quality, research-based core curriculum is utilized and should be effective with approximately 80% of student body.
Tier 2	The core curriculum is utilized in conjunction with supplemental instruction, such as smaller group instruction, for approximately 10-15% of student body.
Tier 3	The core curriculum is implemented along with intensive instruction, such as individualized instruction, for approximately 5% of student body.
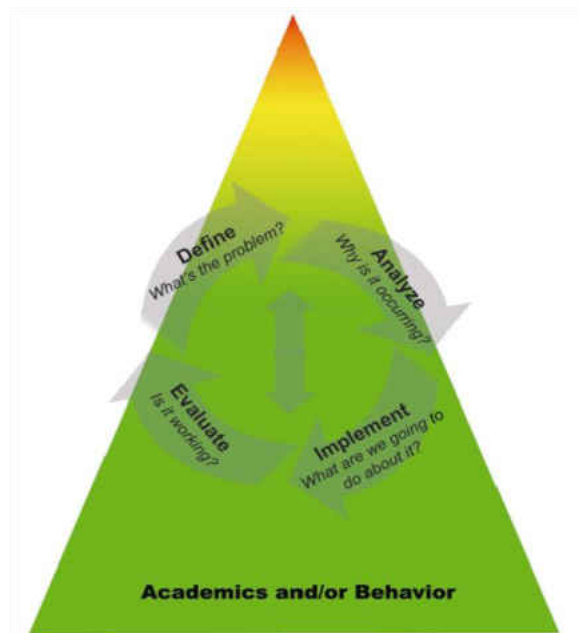
(Replicated with permission from Clark Dorman, Project Leader, Florida's Problem Solving/Response to Intervention Pilot Project)

Figure 1: *Tiered Model of School Supports and the Problem Solving Process from the Florida*

PS/RtI Project

RtI Implementation Cautions

Various cautions with implementation of RtI warrant careful review, particularly when considering the use of RtI as an eligibility mechanism for exceptional student education services, as permitted by the reauthorization of IDEA (Sugai & Horner, 2009). One overarching concern reflects a lack of a consistent, operationalized definition of "nonresponsiveness" within an RtI model (Fuchs & Fuchs, 2006a). Specific cut-off scores or benchmarks have not been established in order to systematize the use of RtI across schools, districts, states, and the nation for eligibility purposes (Sugai & Horner, 2009). Therefore, eligibility mechanisms and requirements may differ across locations, leading to inconsistencies in special education identification, unreliable diagnoses, and differential prevalence rates of disabilities (Fuchs & Fuchs, 2006a).

The standardization of assessments and measurement procedures associated with RtI constitutes a second major concern (Fuchs & Fuchs, 2006a; Sugai & Horner, 2009). In assessing the responsiveness of students, it is critical to determine whether responsiveness is being compared to the overall classroom population or to other students receiving a similar level of intervention (Fuchs & Fuchs, 2006a). For example, educators and researchers must determine, particularly when special education eligibility is in question, if it is most appropriate to evaluate the responsiveness of a Tier 2 student in comparison to other Tier 2 students or in contrast to those students who responded effectively in Tier 1.

A third implementation caution associated with RtI relates to the efficiency, effectiveness, and relevance of interventions themselves (Sugai & Horner, 2009). Classrooms are composed of a vast array of learners with different needs. Interventions that are highly efficient and effective across these different student populations, particularly with respect to the

amount of time required, are important, given the current high-stakes educational environment. Empirical evidence may support high intensity, long-term interventions, but the realities of classroom environments may make such interventions less feasible to implement. Additionally, the integrity and fidelity of implementation must be addressed (Sullivan & Long, 2010). Given that research indicates that most teachers implement interventions with less than 10% integrity to the intended design, addressing this component is critical because of the emphasis placed upon students' responsiveness to the interventions implemented by teachers as part of the RtI process (Sullivan & Long, 2010).

Another caution that must be considered is the applicability of interventions across cultural contexts, grades, ages, and student ability levels (Sugai & Horner, 2009). As will be discussed subsequently, significant concern exists regarding the use of RtI with culturally and linguistically diverse populations due to the paucity of empirically validated interventions for use with this population.

RtI with English Language Learners

English Language Learners within the U.S. School System

For the remainder of this literature review, the focus will be on the use of RtI with ELLs, a population that is demonstrating a faster rate of growth than the general U.S. student population (Rhodes et al 2005). Data show the ELL student population in the United States increased by nearly 105% from the 1989-1990 to 1999-2000 census periods (Rhodes et al., 2005). In comparison, the general student population in the U.S. increased only 24.21% during

the same time period. ELLs are the fastest growing segment of the pre-Kindergarten through twelfth grade population (Linan-Thompson & Ortiz, 2009). It is estimated that by 2030, 40% of the school population in the United States will speak English as a second language (Orosco & Klingner, 2010). Approximately 52% of ELLs are U.S.-born (Brown, Sanford, & Lolich, 2010). It should be noted that the ELL student population in the U.S. is highly diverse, with over 400 different languages represented (Rhodes et al., 2005). This diversity among ELLs represents heterogeneity not only in language but also in ethnicity, nationality, socioeconomic background, immigration status, and generation in the United States (Orosco & Klingner, 2010). Spanish speakers represent the largest group, comprising 77% of ELLs (Rhodes et al., 2005). An increased effort to better understand the needs of ELLs, particularly in the state of Florida, is warranted due notable demographic growth documented over the past several decades.

The state of Florida warrants attention with respect to its ELLs due to several demographic characteristics related to ELLs. During the 2006-2007 school year, Florida was home to 234,614 ELLs (Education Information and Accountability Services, 2009). Approximately 67% of Florida schools serve ELL students, and approximately 51% of teachers have ELLs within their classrooms, according to 1999-2000 data (Rhodes et al., 2005). According to the Florida Department of Education, "the percentage of ELL students in Florida's public schools continued on a gradual, long-term upward trend" during the 1997-2007 decade (FL DOE, 2007, p. 2). During this period, the number of ELLs in Florida has increased approximately 58% (FL DOE, 2007). Six states, including Florida (in conjunction with Arizona, California, Texas, New York, and Illinois), house 60% of the nation's ELL population (Capps et al., 2005). Florida ranks among the top three states with large, urban districts that house an

increased percent of total national ELL enrollment (Payan & Nettles, n.d.), and Florida has the

fourth highest concentration of ELLs in the nation (Dukes, 2005). Due to the large presence of

ELLs in the state of Florida, this state was selected as the focus for investigation through this

research.

According to the National Center for Education Statistics (NCES) of the U.S. Department

of Education, ELLs, formerly referred to as Limited-English Proficient (LEP) students, are

identified as those with a native or dominant language other than English and who exhibit a

sufficient degree of difficulty in speaking, reading, and writing English such that they are unable

to learn successfully in an English-only classroom (NCESa, 2004). Individual state definitions

provide additional information regarding the nature of English language learners. Florida

Statutes (Florida Department of Education, 2007, p. 1) define an ELL as:

> an individual who was not born in the United States and whose native language is a
>
> language other than English; an individual who comes from a home environment where a
>
> language other than English is spoken in the home; or an individual who is an American
>
> Indian or Alaskan native and who comes from an environment where a language other
>
> than English has had a significant impact on his or her level of English language
>
> proficiency; and who, by reason thereof, has sufficient difficulty speaking, reading,
>
> writing, or listening to the English language to deny such individual the opportunity to
>
> learn successfully in classrooms where the language of instruction is English
>
> (1003.56(2)).

Academic outcomes for ELLs have been shown to be significantly depressed compared

to native English speakers (Xu & Drame, 2007) In fact, students whose home language is not

English represent a group with the highest dropout rate, lowest achievement scores, largest mobility rate, and highest rate of poverty (Xu & Drame, 2007). The following has been reported regarding the educational performance and attainment of ELLs in U.S. schools:

1. Over 50% score in the bottom third in reading or math (Haager, 2007).

2. Seventy three percent of ELLs in fourth grade and 71% of those in eighth grade perform below basic levels on reading measures in English (Linan-Thompson & Ortiz, 2009) in comparison to 30% of non-ELL students (Ray-Subramanian & Coffee, 2010).

3. In comparison to a drop-out rate of 10% for students who speak English at home, the percentage was three times higher (31%) for ELLs who speak English and five times higher (51%) for ELLs who speak English with difficulty (August & Shanahan, 2006). Spanish-speaking ELLs have the highest dropout rates (Linan-Thompson & Ortiz, 2009).

4. ELLs are 27% more likely to be placed in special education during the elementary years and almost two times as likely during secondary years (Xu & Drame, 2007).

Data clearly indicate that in comparison with native English-speaking peers, ELLs "consistently demonstrate lower academic achievements" (Xu & Drame, 2007, p. 305). Overall, ELLs academic development, particularly in the area of reading, is greatly impacted by limited academic language in English (Calhoon, Otaiba, Cihak, King, & Avalos, 2007). ELLs with limited development of English language skills are unable to fully participate in schools, workplaces, and society (August & Shanahan, 2006).

RtI is purported to have the potential to bring about change for ELLs in the U.S. school system by requiring the implementation of research-based practices with a population that is disproportionately represented within the special education system (Brown & Doolittle, 2008a; Klingner & Edwards, 2006). However, the validity of utilizing RtI with ELLs has been questioned both by supporters and detractors since the early stages of the development of the model (Linan-Thompson & Ortiz, 2009). IDEIA came into effect before considerable research regarding the actual implementation of RtI was conducted, and currently, a paucity of research exists relative to RtI with ELLs (Orosco & Klingner, 2010). Even among those who support the use of RtI with ELLs, concerns exist regarding the absence of research that focuses on or at least includes ELLs. Although the use of research-based programs has become the norm in U.S. schools, research focusing on ELLs in particular is lacking (Haager, 2007). As a result, it becomes difficult for schools to determine whether RtI procedures are appropriate for ELLs and as effective for use with ELLs as non-ELLs. Orosco and Klingner (2010) argue that it is too early to know "whether RtI will have a systematic effect on the educational opportunities provided to ELLs" (p. 284). Although RtI appears to hold promise in addressing the unique needs of ELLs (Brown & Doolittle, 2008a; Klingner & Edwards, 2006; Orosco & Klingner, 2010), exactly how this model can be implemented to best serve ELLs is still a topic for research, scholarly examination, and debate (Xu & Drame, 2007).

ELLs and RtI: Limitations and Suggestions

Although RtI is said to hold promise for ELLs with respect to preventing academic failure (Klingner & Edwards, 2006), careful consideration is required in designing and

implementing RtI systems that strategically address the unique needs of this population. The

implementation of RtI with ELLs will necessitate an approach that is not "business as usual,"

given that this status quo

> has led to the over-representation of minorities in special education, the persistence of the
>
> achievement gap, and the continuance of various systemic and individual acts of
>
> discrimination, and the impact of de facto segregation of students resulting from certain
>
> educational policies and practices that are still evident in our nation's public schools (Ten
>
> Regional Title IV Equity Assistance Centers, 2008, p. 1)

> With a limited number of exceptions, research on interventions implemented within an

RtI framework does not provide disaggregated data for ELLs, and/or ELLs are not included in

such studies due to their limited English proficiency (Linan-Thompson et al., 2007). For

example, the National Reading Panel (2000) indicated that it did not directly address issues

related to second language learning (Orosco, 2010). Thus, results of the National Reading Panel

do not highlight effective instructional components for use specifically with ELLs, do not

differentiate between strategies that are effective for ELLs as opposed to native English speakers,

and did not offer recommendations for accommodations and adaptations that are beneficial for

ELLs (Orosco, 2010). In addition to the absence of such research with ELLs, the following must

be considered regarding RtI as a whole:

> RtI is predicated upon effective, research-based and appropriate instruction in the general
>
> education classroom, or Tier 1. That is, it is assumed that all students are provided with
>
> scientifically validated instruction delivered with a high degree of fidelity to the

curriculum, and thus all children are provided with an equal opportunity to learn (Brown & Doolittle, 2008a, p. 66).

Unfortunately, these assumptions are problematic for several reasons when considering RtI with ELLs (Brown & Doolittle, 2008a). First, there is a paucity of training for teachers working with ELLs. In the absence of effective training regarding differentiating language differences from disabilities and on the natural trajectory of second language learning, the efficacy of instruction for ELLs may be diminished (Brown & Doolittle, 2008a). In addition, many of the teams involved in the implementation of RtI also lack the knowledge and training in key areas related to ELLs (Brown & Doolittle, 2008a). The impact of such limited knowledge and training can result in implementation of RtI that may in fact lead to greater disproportionality in special education (Brown & Doolittle, 2008a).

A specific framework for addressing the needs of ELLs within the RtI model is critical in ensuring that RtI does not perpetuate the discriminatory and disproportionate placement of ELLs within special education (Brown & Doolittle, 2008a). In an effort to understand the components needed in crafting an RtI system that readily considers and meets the needs of ELLs, specific recommendations for implementing RtI with ELLs will be reviewed. These recommendations reflect the need for (a) culturally responsive educational systems with culturally sensitive practitioners, (b) practices that are validated with students of cultural and linguistic backgrounds similar to those with whom the instruction and interventions will be utilized, and (c) specialized criteria, beyond that considered for monolingual English speakers, which must be applied when utilizing RtI with ELLs.

Culturally responsive educational systems. RtI for use with ELLs must be nested

within culturally responsive educational systems (Harris-Murri et al., 2006). In such systems,

the belief is espoused that all culturally and linguistically diverse students have the capacity to

succeed academically when access to quality teachers, programs, and resources is provided and

when the distinct cultures, languages, and heritages are valued and incorporated into learning

experiences (Harris-Murri et al., 2006). Furthermore, it is readily acknowledged within such

systems that the experience of being bilingual is very different from that of being monolingual

(Cardenas Hagan, 2010). Researchers have identified eight key variables associated with

culturally responsive educational systems that are critical to the success of RtI with ELLs

(Harris-Murri et al., 2006).

First, positive school climates set the stage for effective RtI implementation with ELLs

(Harris-Murri et al., 2006). Such positive climates incorporate the philosophy that all students

can and will learn. A second critical component involves the school leadership itself;

administrators must be committed to establishing and supporting special language programs

(including bilingual education) that will readily and most appropriately meet the needs of ELLs

(Harris-Murri et al., 2006). It is incumbent upon school leaders to establish a system for

monitoring the performance of all students, for establishing specific educational goals, and for

measuring the effectiveness of interventions aimed at achieving these goals. A shared

knowledge base is a third crucial variable for successful implementation of RtI with ELLs; this

knowledge base is composed of common understandings among school personnel regarding the

education of diverse learners (Harris-Murri et al., 2006). Consistent and specific professional

development is key to continued strengthening of this shared knowledge and should focus on

issues including first and second language acquisition, the role of sociocultural variables on learning, methods for teaching English as a second language, and strategies for working with diverse students and families. Fourth, collaboration across various specialties and professionals is critical (Harris-Murri et al., 2006). Universal screening and progress monitoring compose a fifth prerequisite for the successful implementation of RtI with ELLs (Harris-Murri et al., 2006). Measures used for screening and monitoring should be skill-specific and should match the language of instruction for ELL students. Unfortunately, validity data on many screening and assessment tools is limited for ELLs, and therefore, teachers must carefully interpret screening scores with an understanding that the trajectory of learning may be different for ELLs than for non-ELLs. A sixth vital component is effective instruction, implemented through the use of a core curriculum established with consideration for national and state standards and specific for use with ELLs (Harris-Murri et al., 2006). It is incumbent upon teachers to deliver this curriculum in a manner that challenges students and emphasizes higher-order thinking and problem-solving. Effectively established programming designed to facilitate an ELL's transition from second language learning instruction to general education programming is a seventh component that should be considered. Finally, a clear understanding of, and emphasis on, the development of academic language (as opposed to basic interpersonal communications skills) is critical for an RtI framework to be effective for use with ELLs (Harris-Murri et al., 2006).

Culturally responsive educational systems are composed, perhaps most importantly, of educators with the specific knowledge, skills, and dispositions vital in educating diverse learners (Kea, Campbell-Whatley, & Richards, 2006). In the absence of such educators, culturally and linguistically diverse children will continue to go underserved (Kea et al., 2006). Educators,

including school psychologists, within culturally responsive systems are able to examine and analyze their individual world views and establish a heightened level of intercultural sensitivity that will enable them to move beyond a cultural deficit view; rather than viewing students as "deficient" in knowledge and skills, educators must view them as "proficient" in ways that differ from the cultural norm (Van Hook, 2000). Culturally responsive educators engage in purposeful consideration of factors that impact a student's success or failure in a classroom (National Center on Response to Intervention, 2010). Such educators are familiar with the beliefs, values, and cultural and linguistic practices of students; culturally responsive individuals acknowledge and directly address the "continua of cultural variants," such as family life, social interactions, individuality, time, age, and religious tenets, that influence both educator and student alike (Orosco & Klingner, 2010; Sanchez-Lopez, 2007, p. 25). If educated to move beyond the deficit view and into the development of intercultural sensitivity, educators can actively espouse the six characteristics identified by Villegas and Lucas (2002) as critical components of culturally responsive practitioners: (1) an understanding that one must examine one's own cultural identity and understand that ever-present impact of one's beliefs (sociocultural consciousness); (2) an affirming attitude and respect for students from diverse backgrounds; (3) a commitment to and development of the skills needed to act as change agents; (4) a view that all students can learn and that educators provide the scaffolding needed to learn successfully (constructivist view of learning); (5) an active desire to learn about students' backgrounds and personal stores of knowledge; and (6) a well-developed knowledge of culturally responsive strategies (Kea et al., 2006). Due to the critical role of intercultural sensitivity (Van Hook, 2000) in the establishment

and maintenance of culturally responsive programming, a further discussion of this construct will be presented in a subsequent section of this literature review.

Validation of instruction and intervention. Other researchers assert that in addition to being culturally responsive, instruction must be validated with students similar to those with whom the instruction will be utilized (Klingner & Edwards, 2006). Instructional practices and interventions at each tier of RtI must be based upon empirical evidence collected through a research process that involves investigating what practices work "with whom, by whom, and in what contexts" (Klingner & Edwards, 2006, p.108). By addressing each of these three areas, the actual mechanisms by which RtI can be utilized with efficacy and validity with the ELL population can be explored.

The question "with whom?" highlights the importance of validating practices with students similar to those with whom the practice will be applied (Klingner & Edwards, 2006). For an intervention to be empirically validated, it must be scientifically research-based, investigated through rigorous methodology, and the sample must be disaggregated in terms of native language groups, race and ethnicity, language proficiency and dominance, school history, degree of acculturation, and other socio-cultural and linguistic variables (Garcia, 2009; Klingner & Edwards, 2006). A fundamental limitation of RtI with ELLs is present when this most basic criterion is not met (Klingner & Edwards, 2006). Unfortunately, ELLs may be excluded from normative samples due to their level of English proficiency, and researchers often fail to include sufficient information about participants in research analyses, making it difficult to determine whether use of a particular practice with ELLs would be valid (Klingner & Edwards, 2006). As with the exclusion of ELLs from the National Reading Panel (2000) recommendations, national

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legislation related to reading and literacy development often emphasizes strategies and processes that are not consistent with what is known about how children learn a second language and develop academic skills in that second language (Garcia, 2009).

The question "by whom?" reflects the premise that an ongoing analysis of general education/core instruction is a critical component of RtI models (Klingner & Edwards, 2006). The adequacy of instruction must be explored prior to developing the assumption that a student's lack of responsiveness is due to internal factors (Klingner & Edwards, 2006). Due to the vast variability that exists in teachers' levels of training, skills, and personal comfort in working with ELLs, the degree to which interventions will be implemented and monitored is variable; thus, it is unknown whether students are being provided with "an adequate opportunity to learn" (Klingner & Edwards, 2006, p. 111). Many educators are not adequately prepared to work with ELLs, and RtI is therefore implemented in a "one-size-fits-all approach," a practice that will not be sufficient for RtI to truly impact the academic performance of ELLs (Orosco, 2010). Furthermore, in cases where specific interventions have been evaluated for use with ELLs, it has often been the research team (rather than individual teachers or other school-based personnel) implementing the interventions; as a result, a "picture" of RtI with ELLs as implemented at the school level is still undeveloped (Orosco, 2010). ELLs' success or failure within the RtI model may be predicated upon educators' understanding and promotion of individual learners' sociocultural experiences (Orosco, 2010).

The question "in what contexts?" highlights the need to evaluate the context of a school where an RtI model is implemented (Klingner & Edwards, 2006). Across schools, variability is present that can affect the academic performance of ELLs. Schools do not exist independent

from the social norms and nuances that surround them, and the impact of these greater societal influences must be considered when addressing the needs of ELLs through an RtI model. With this question ("In what contexts?), the vital role of culturally responsive educators with well-developed levels of intercultural sensitivity is again emphasized.

Specialized criteria. Beyond nesting RtI within culturally responsive educational systems and assuring the validation of instruction and intervention, three additional critical criteria within the RtI model must be addressed when considering its use with ELLs: (1) the quality of the general education program, (2) what constitutes a failure to respond to interventions, and (3) the accuracy of the assessment process (Elizalde-Utnick, 2008). The first criterion, the quality of the general education program, is critical to consider when implementing RtI with ELLs because many ELLs may experience lower quality instruction or instruction that is not appropriate given their language needs (Elizalde-Utnick, 2008). The core curriculum at Tier 1 has been designated as critical in establishing an effective RtI model for ELLs; however, Tier 1 itself (the core curriculum, that is) may be misaligned with the diverse needs of ELLs (Orosco, 2010). Orosco (2010) argues that statistics on the academic difficulties that ELLs face indicate that the majority of ELLs continue to struggle at Tier 1 and, as a result, the very foundation of RtI may be "on shaky ground" (p. 269). The current conceptualization of RtI utilizing current core curricula may not be the "right blueprint for ELLs" (Orosco, 2010, p. 269). Among the variables that can be adjusted and changed to aid in the creation of an effective learning environment for ELLs are: (a) instruction in the native language; (b) content-based instruction in English; (c) carefully crafted reciprocal instruction; (d) incorporation of students' native cultures and languages; interaction with native English-speaking peers; and (e) an

emphasis on the value of ELLs within a school community (Elizalde-Utnick, 2008). Teacher training regarding how to differentiate instruction within the core for ELLs is critical, as such differentiation allows for the adaptation of core instruction to the specific needs of students learning English as a second language (Elizalde-Utnick, 2008).

The second criterion relates to the assumption that if a student does not respond to interventions within an RtI model, the cause of limited responsiveness to intervention is due to variables intrinsic to the student rather than the efficacy of the instructional program (Elizalde-Utnick, 2008). The instructional program itself must be analyzed to determine if a match exists between the curriculum and a student's language proficiency; if a student is unable to access the curriculum in the manner intended, then the question must be posed as to whether the learning difficulty is an internal or external problem (University of the State of New York and New York State Education department, 2010). In analyzing the performance of ELLs, it is also critical to consider the research on second language acquisition, which indicates that although ELLs may need up to seven to ten years to acquire English to a level equivalent to that of native English speaking peers, ELLs are often exited from language support programs within three years (Elizalde-Utnick, 2008). Therefore, students may be expected to perform on par with native English speaking peers prematurely. A lack of responsiveness to intervention at the same level as these peers may inappropriately be identified as an intrinsic learning deficit rather than a demonstration of a continued need for language development support (Elizalde-Utnick, 2008). Similarly, it is critical to understand that ELLs are not "blank slates;" ELLs enter the classroom with varying levels of proficiency and literacy in the native language (August & Shanahan,

2006) and with background experiences that impact their presence and performance in a classroom (Cardenas Hagan, 2010).

A third criterion to be considered is related to the accuracy of the assessment process implemented with ELLs within an RtI model (Elizalde-Utnick, 2008). Research has shown that the quality and appropriateness of assessment often remain unexamined and result in the use of mainstream assessment and instructional values that may hold little relevance to the home culture and language of ELLs (Orosco & Klingner, 2010). Such misalignment between assessment and ELL student characteristics can precipitate the inappropriate recommendation of students for increased support within the RtI framework up to and including assessment for special education (Orosco & Klingner, 2010). As indicated by other researchers, there is an absence of research on the validity and efficacy of academic interventions specifically with ELLs and only those interventions with empirical evidence of effectiveness on similar populations of ELLs should be applied within the RtI framework (Orosco & Klingner, 2010). The importance of replicating studies conducted with monolingual English speakers to determine the usefulness of such strategies with ELLs must be emphasized (Elizalde-Utnick, 2008).

ELLs and RtI: Tiers 1, 2, and 3

The recommendations presented above focus on the importance of culturally responsive educational systems, validation of instruction and interventions on populations similar to those with whom they will be implemented, and additional specialized criteria to consider when implementing RtI with ELLs. With an understanding of these recommendations, a culturally and linguistically responsive three-tier RtI model for this population can be addressed. This model

is intended to serve as a tool documenting the additional considerations needed to ensure that RtI with ELLs does indeed not become "one more discriminatory system" (Brown & Doolittle, 2008a, p. 67).

Tier 1. Similar to Tier 1 for native English speakers, Tier 1 for ELLs is conceptualized as high-quality, research-based instruction that is culturally responsive and coupled with ongoing progress monitoring and data analysis (Klingner & Edwards, 2006; Brown & Doolittle, 2008a). Tier 1 should be based upon "high but reasonable expectations" (Vaugh & Ortiz, n.d., p. 3). This level of academic intervention is defined as primary prevention (Richards, Leafstedt, & Gerber, 2006) and is predicated on the presence of evidence-based instructional practices that have been empirically investigated and validated with culturally and linguistically diverse populations (Klingner & Edwards, 2006). At Tier 1, instruction should be differentiated based upon students' academic performance levels, linguistic proficiencies in both the native language and English, and cultural backgrounds (University of the State of New York & New York State Education Department, 2010). Instruction at Tier 1 is effectively differentiated for ELLs through the use of clear learning objectives and the use of a variety of techniques (such as visual presentation of material, repetition, and extensive opportunity to practice) that have been shown to be effective with ELLs (Echevarria & Hasbrouch, 2009). Tier 1 assessment and screening should incorporate the native language in addition to English (Sun, Nam, & Vanderwood, 2010).

Within Tier 1, the concept of cultural and linguistic responsiveness is critical (Klingner & Edwards, 2006), and educators must embody what it means to be culturally and linguistically responsive and sensitive. It is vital that teachers foster a pedagogy that is anchored in the cultural and linguistic experiences of their students and carefully considers the linguistic needs of

ELLs (Brown & Doolittle, 2008a; Rinaldi & Sampson, 2008). "Language and culture are never viewed as liabilities but rather as strengths" (Brown & Doolittle, 2008a, p. 68).

Tier 1 instructional programming should be assessed to determine whether a match exists between the curriculum itself and the level of language proficiency of the ELLs with whom the curriculum is being utilized (Brown & Doolittle, 2008a). In implementing Tier 1 with ELLs, students' levels of interpersonal language proficiency in both English and the native language should be considered in addition to the recommendations made by bilingual education or English for Speakers of Other Languages (ESOL) personnel (Rinaldi & Samson, 2008). In considering such variables, educators should examine the achievement of ELLs not in comparison to native English-speaking peers but in contrast to "true peers," students with similar language profiles, cultures, and background experiences (Brown & Doolittle, 2008a). If other "true peers" demonstrate similar academic concerns, evidence exists that the Tier 1 instructional programming is ineffective for a given group of ELLs (Brown & Doolittle, 2008a). ELLs who may function well and be effectively served through Tier 1 include (1) ELLs who are nearing establishment of fluent levels of academic language in English, (2) those who perform well academically, as documented on universal screening data, within a strong, differentiated core curriculum, and (3) 'typical' ELLs who perform poorly on English benchmark measures but are supported through native language instruction (Aldrich, 2011).

As indicated previously, the research base of instructional approaches that has been specifically investigated for use with ELLs within RtI is limited (Klingner & Edwards, 2006). Additionally, the validity of screenings and other assessments are of concern, due to the fact that these assessments are influenced by language, cultural, and experiential backgrounds (Brown,

Sanford, & Lolich, 2010). These contextual factors must be consistently considered when interpreting Tier 1 screening and assessment data.

In light of such concerns, Brown and Doolittle (2008b) provide specific and strategic guidance for implementing RtI with ELLs with a series of questions and variables to consider at each tier. Because of the utility and practicality of Brown and Dolittle's framework, the reader is encouraged to reference their work in its entirety.

Tier 2. As with Tier 2 for native English speakers, Tier 2 implemented with ELLs is intended to provide more focused and targeted support (Brown & Doolittle, 2008a; Klingner & Edwards, 2006). Interventions for ELLs needing Tier 2 support (those who perform academically at a level below that of true peers at Tier 1) should be provided in a small group setting (three to six students) and may be delivered by specialist educators, including reading specialists, speech/language pathologists, curriculum resource teachers, or by the classroom teacher (Brown & Doolittle, 2008a; Vaughn & Ortiz, 2008). Student performance should be observed and measured across different settings and tasks (Brown & Doolittle, 2008b). Many ELLs respond positively to the explicit and systematic instruction that can be delivered through Tier 2 in addition to the general education curriculum (Linan-Thompson & Ortiz, 2009). In fact, it is critical that Tier 2 interventions be provided as a supplement to the general education curriculum, not as a substitute for it (Brown & Doolittle, 2008a). ELLs at Tier 2 should be receiving an additional layer of instruction that is targeted to those needs identified through the screening and progress monitoring processes undertaken during Tier 1 (Brown & Doolittle, 2008a; Klingner & Edwards, 2006); such additional instruction should be provided for approximately 30 minutes per day beyond the core instructional time (Vaughn & Ortiz, 2008).

A limited research base exists regarding what intensive, Tier 2 support should be for ELLs and whether Tier 2 intervention should be different from (or alike to) that provided for native English speakers identified as needing additional support (Klingner & Edwards, 2006). It is clear, however, that as with Tier 1, Tier 2 support must be linguistically and culturally appropriate (Brown & Doolittle, 2008a). Use of strategies to support English language development must not be incidental (Linan-Thompson & Ortiz, 2009); that is, careful emphasis on the development of language skills must continue at Tier 2.

In implementing Tier 2 with ELLs, various factors should be explicitly addressed in analyzing student performance (Rinaldi & Sampson, 2008). It is critical that instruction directly address the language needs of the student and that it be based upon the professional recommendations of bilingual or ESOL specialists (Rinaldi & Sampson, 2008). The language of intervention at Tier 2 and the language of instruction at Tier 1 must be the same (Sun et al., 2010). The specific rate of progress and degree of English language proficiency of a student should be carefully monitored, and level of academic language proficiency should be directly assessed (Rinaldi & Sampson, 2008). In addition, it is critical that a student's linguistic skill in both English and the native language be assessed in such a manner that comparative language profiles can be obtained (Rinaldi & Sampson, 2008). Careful and accurate monitoring of student progress through intervention should be maintained, and instruction should be adjusted based upon data analysis (Brown & Doolittle, 2008b). The intended outcome of a Tier 2 intervention is that ELLs will learn the specific skills with which they have been struggling and can then benefit from Tier 1 instruction alone (Echevarria & Hasbrouck, 2009).

Tier 3. Similar to Tier 3 for native English speakers, Tier 3 for ELLs should consist of intensive, differentiated, and possibly individualized instruction (Brown & Doolittle, 2008a). Progress monitoring of student performance should be continual, and decisions regarding the efficacy of a given instructional intervention must be data-driven. Educators should consider the appropriateness and number of data-driven interventions implemented at Tier 2 (Brown & Doolittle, 2008b). Tier 3 is designed for those ELLs who are performing at a level lower than that of "true peers" and are also learning at a slower rate than those same peers (Brown & Doolittle, 2008a). At Tier 3, educators may want to consider the implementation of a curriculum designed for use with ELLs that is different from the curriculum used at Tiers 1 and 2 (Brown & Doolittle, 2008a); this curriculum must be research-based (Echevarria & Hasbrouck, 2009). In determining what interventions and/or differentiated curriculum should be used at Tier 3, the developmental, functional, cultural, academic, and linguistic needs of the student should be considered (Brown & Doolittle, 2008b). As with Tier 1 and Tier 2, the cyclical process of assessment, intervention, and data analysis should be continued at Tier 3.

Diversity among ELLs. Brown and Doolittle's (2008a) emphasis on the concept of "true peers" is critical to consider even among ELLs. It is vital to understand that among ELLs, there is great diversity. ELLs differ in their cultures, background experiences, language, and linguistic proficiency (Brown & Doolittle, 2008a). Research indicates that in the early stages of bilingualism, an ELL's language skills are rapidly changing, resulting in a wide range of what is considered "normal" proficiency in the second language (Geisler, 2010). It is often difficult to differentiate ELLs with typical second-language differences from those with language impairments (Geisler, 2010) or other learning disabilities. In fact, a primary weakness of

research regarding minority students within exceptional education reflects the tendency to overestimate the homogeneity of populations by failing to disaggregate and/or consider factors, also known as diversity markers, such as language proficiency, social class, or program type (Artiles, Rueda, Salazar, & Higareda, 2005). There is a scarcity of research on within-group diversity among ELLs (Artiles et al., 2005). It is incumbent on educators involved in the RtI process with ELLs to recognize this within-group diversity and consider the impact of diversity markers at all tiers. Just as concerns are raised regarding the use of RtI as a "one-size-fits-all" approach when considering native English speakers and ELLs (Orosco, 2010), RtI should not be interpreted as a "one-size-fits-all" model among ELLs either.

ELLs and RtI: Recommendations

Without consistent and critical dialogue, the use of RtI with ELLs risks being "like old wine in a new bottle, in other words, just another deficit-based approach to sorting children" (Klingner & Edwards 2006, p. 115). As has been alluded to previously, although researchers appear to agree that RtI provides a potentially beneficial alternative mechanism for reducing disproportionality in special education and for increasing the educational performance of ELLs through the provision of early preventative instruction, specific questions persist regarding the numbers of ELLs who remain at risk following interventions as well as specific procedures for actually identifying the risk status of such students (Linan-Thompson et al., 2007). As previously indicated, investigations on interventions recommended for and used within RtI frameworks often exclude ELLs due to their limited English proficiency and do not provide data disaggregated by students' language proficiency (Linan-Thompson et al., 2007).

Research with native English speakers clearly supports the concept that the most effective method for ameliorating academic problems is through the use of early intervention (Vanderwood, Linklater, & Healy, 2008). Subsequent to identification, at-risk learners can make academic gains through the implementation of research-based instruction. The question remains, however, as to what exactly "good," research-based instruction looks like for ELLs (Vanderwood et al., 2008) and how this can be incorporated into an RtI framework for use with ELLs. In addition to concerns with the breadth and depth of the instructional and intervention research base regarding the use of RtI with ELLs, additional critical factors must be considered when analyzing the performance of ELLs within an RtI framework, such as level of proficiency in multiple languages, level of acculturation, appropriateness of general education instruction for ELLs, and quality of support services for English language acquisition (Haager, 2007). Federal guidelines prescribing the use of RtI, however, do not specify what these additional variables for consideration with ELLs are and how educators can ensure that the appropriate considerations are in place when utilizing RtI with ELLs (Haager, 2007).

Both the Ten Regional Title IV Equity Assistance Centers (2008) and Garcia (2009) provide specific and targeted guidance in crafting RtI models for use with ELLs that address the unique needs and concerns of this population. According to Ten Regional Title IV Equity Assistance Centers (2008), the effective implementation of RtI with ELLs requires a recasting of educational practices at every level. In the absence of a commitment to a new reality of educational experiences, RtI will fail to precipitate the changes it promises (Ten Regional Title IV Equity Assistance Centers, 2008). The Centers provide 11 specific conditions necessary for RtI to impact the current status of ELLs in the U.S. educational system: (1) Ensure the creation

and implementation of an equity context; (2) Commit to high achievement for all learners; (3) Commit to real access and inclusion; (4) Commit to equitable treatment; (5) Commit to a real opportunity to learn for all students; (6) Commit to rethinking and redirecting resources to support students at each tier; (7) Ensure joint accountability among all stakeholders for RtI implementation and learning improvements; (8) Create criteria and set interventions appropriately; (9) Provide specific and immediate professional development to properly implement RtI interventions; (10) Take immediate steps to certify all teachers to instruct ELLs; and (11) Inform and engage parents at every step of the RtI effort. The reader is encouraged to reference the Center's white paper in its entirety for more specific recommendations.

Garcia (2009) provides a framework for culturally and linguistically responsive design of RtI models that situates the classroom learning environment within the greater contexts of the school; local, state, and federal influences; and socio-cultural, linguistic, and community contexts. At the classroom level, both student and teacher characteristics must be addressed, and both a culturally and linguistically responsive curriculum as well as early intervention must be present (Garcia, 2009). At the school level, a shared responsibility for all students, an array of general education services and options, professional development focused on ELLs, collaborative relationships with the families of ELLs, problem solving support systems, alternative services, and special education programming must all be present (Garcia, 2009). The aforementioned class- and school-level variables must all be understood from the greater contexts of legislation and the community within which they are situated (Garcia, 2009). The reader is encouraged to reference Garcia's work in its entirety.

In addition to the work of the Ten Regional Title IV Equity Assistance Centers (2008) and Garcia (2009), other researchers and authors exploring the use of RtI with ELLs provide concrete recommendations that must be considered when implementing RtI with this population. Throughout previous portions of this review of the literature, these recommendations have been touched upon but are again highlighted due to their importance in ensuring the valid use of RtI with ELLs. It appears that the recommendations made by researchers to date fit into one of three major categories: cultural/linguistic responsiveness, training, and research. Table 2 describes these categories and integrates the recommendations made in the literature.

Table 2: *Summary of Recommendations for RtI with ELLs*

Category	Description
Cultural & Linguistic Responsiveness	At the core of implementation of RtI with ELLs is the use of culturally and linguistically responsive instruction and educators who embody the characteristics of culturally responsive educators (Xu & Drame, 2007; Kea, Campbell-Whatley, & Richards, 2006). Learning environments for ELLs must be empirically oriented, meaningful for the students, and enriched by individual differences. Intercultural sensitivity of educators is a key variable (Van Hook, 2000).
Educator Training & Collaboration	Educators must receive carefully designed training beginning at the pre-service level on how "to adjust and enhance instruction or supplement assessments for ELLs" (Haager, 2007, p. 217). "Teacher preparation is critical to the success of RtI models" (Xu & Drame, 2007, p. 310).
Empirical Research on Instruction & Interventions	Key to the successful implementation of RtI with ELLs is the establishment of a large research base of empirically-validated interventions shown to be effective with ELLs when implemented as part of an RtI framework. Investigation of tools proven to be effective with non-ELLs can facilitate the development of instructional tools, and practices with dual utility and flexibility in implementation can enhance the capacity to meet the unique needs of certain settings and populations (Haager, 2007).

Intercultural Sensitivity

A key role of educator preparation programs is to facilitate the development of intercultural sensitivity among pre-service educators (Van Hook, 2000). A better understanding of the concept of intercultural sensitivity is presented as part of this literature review for two reasons. First, a clear definition precipitates a comprehensive understanding of the goal state for educators (including school psychologists) as they seek to develop those attributes related to intercultural sensitivity. Secondly, the rationale for analyzing the intercultural sensitivity of school psychologists as part of the current research endeavor will be demonstrated.

Intercultural sensitivity is one of the most critical abilities that helps us live with success in a culturally diverse environment (Chen & Starosta, 1997). The enormous influx of non-native speakers of English necessitates an educational system and curriculum that meet the needs of ELLs, promote and enhance learning, and incorporate and accommodate the differing communication and learning styles of students that may not match that of educational professionals, including school psychologists (Chen & Starosta, 1997). Intercultural sensitivity can be defined as "an individual's ability to develop a positive emotion towards understanding and appreciating cultural differences that promotes appropriate and effective behavior" (Chen & Starosta, 1997, p. 7); it is an individual's active motivation to understand, appreciate, and accept cultural differences (Chen & Starosta, 2000). Intercultural sensitivity involves personal emotions, the ability to project and receive positive emotional responses, and acknowledgement and respect for cultural differences (Chen & Starosta, 1996). Intercultural sensitivity "mediates how we relate to the world" (Chen & Starosta, 1996, p. 59). Those individuals with high degrees of intercultural sensitivity exhibit the desire to understand, appreciate, and accept differences

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among cultures. Highly developed intercultural sensitivity is the result of six primary attributes:

(1) a high degree of self-esteem or self-worth (self-esteem); (2) the ability to self-monitor, or

regulate, behavior in response to situational constraints (self-monitoring); (3) a high degree of

open-mindedness or the ability to accept the multiplicity of realities and different world views

(open-mindedness); (4) well developed empathy, or the capacity to share another's experience

(empathy); (5) a high degree of comfort with interaction involvement and understanding of

interactions (interaction involvement); and (6) the capacity and desire to suspend judgment and

listen with sincerity and a feeling of enjoyment toward differences with others (non-judgment)

(Chen & Starosta, 1997). The attributes of intercultural sensitivity allow individuals to be

"sensitive enough to acknowledge and respect our cultural differences" (Chen & Starosta, 1996).

Intercultural sensitivity can be conceptualized as the mindset that helps individuals understand

how others differ in behavior, perceptions, and feelings and to appreciate and respect the other

(Chen & Starosta, 2000).

It is evident that educators must carefully and conscientiously analyze their individual

world view to identify the presence of subtle biases, both intentional and unintentional, that

influence their interaction with students (Van Hook, 2000). School psychologists, like other

educators, are working with increasingly diverse student populations and must actively work to

embody the characteristics that Kea and colleagues (2006) identify as key to developing as

culturally responsive participants in the education of ELLs. As such, school psychologists must

continually strive to develop an enhanced awareness and knowledge of both the self and others

and to continually respect cultural differences, operating not from a deficit perspective of culture

but from one that celebrates and builds upon differences (Edwards, Holtz, & Green, 2007).

These recommendations for school psychologists map directly onto the concepts of "sociocultural consciousness" and "an affirming attitude toward students from culturally diverse backgrounds" that Kea and colleagues (2006) deem critical to becoming culturally responsive educators. These two specific attributes parallel the conceptualization of intercultural sensitivity delineated by Chen and Starosta (2000) and reinforce the tenet that intercultural sensitivity is a necessary and foundational attribute of the culturally responsive educator.

As set forth previously, a key component to equitable implementation of RtI with ELLs is the creation and sustained maintenance of culturally responsive educational practices. The term culturally responsive means, at its core, responding proactively and empathetically to the needs of students (Ford & Kea, 2009). Culturally competent educators with high degrees of intercultural sensitivity work to understand, respect, and meet the needs of students whose backgrounds may be different from their own (Ford & Kea, 2009). Given the critical need for culturally sensitive practitioners, understanding the degree of intercultural sensitivity of educators becomes a pressing matter in the equitable implementation of RtI with ELLs.

Conclusions

The purpose of this literature review was two-fold. First, the underlying principles of RtI were investigated as a backdrop in an effort to provide a solid understanding of this framework and the reasons for its recent increase in use and popularity. Second, a comprehensive exploration of the literature regarding the use of RtI with ELLs was provided and comprises the primary focus of this review. As documented, the number and percentage of ELLs within the U.S. school system is growing substantially, yet the research base relative to academic

interventions empirically investigated with this specific population is limited in comparison to what is known about intervening academically with native English speakers. The second portion of the review focused on "what is different" about implementing RtI with ELLs. The following conclusions are offered for each part of this literature review:

RtI: Development, Rationale, and Implementation. RtI is gaining not only in popularity but in legal standing across the United States. Therefore, it is critical that all educators become trained and proficient in understanding the foundations of RtI and how RtI is implemented in their given locations. RtI models are primarily of a three-tier, problem-solving approach that utilizes increased levels of intensive intervention in an effort to adequately meet the needs of all students.

RtI with Culturally and Linguistically Diverse (CLD) Students. ELLs are the fastest growing segment of the pre-Kindergarten through twelfth grade population in the U.S. (Linan-Thompson & Ortiz, 2009). Whereas the educational needs of ELLs within an RtI framework differ in comparison to native English speakers, multiple researchers agree that RtI has the potential to create change for ELLs through its emphasis on empirically-validated interventions (Brown & Doolittle, 2008a; Klingner & Edwards, 2006). In addition, RtI may provide an avenue for decreasing the disproportionate representation of ELLs within special education (Brown & Doolittle, 2008a; Klingner & Edwards, 2006). Researchers caution, however, that *how* RtI can best meet the needs of ELLs is still an area in need of further investigation and scholarly examination (Xu & Drame, 2007).

Some of the primary recommendations for the use of RtI with ELLs involve (1) the emphasis on culturally responsive educational practices initiated by educators, including school

psychologists, with high degrees of intercultural sensitivity (Harris-Murri et al., 2006; Van Hook, 2000; Edwards et al., 2007); (2) consistent and specific training of educators regarding addressing the unique needs of ELLs within the RtI framework (Ten Regional Title IV Equity Assistance Centers, 2008); (3) the use of interventions that have been validated with students similar to those with whom they will be utilized (Elizade-Utnick, 2008); and (4) on situating RtI within surrounding environments (social norms, societal influences, etc.) (Garcia, 2009).

Research Agenda. Based upon the extensive literature review regarding RtI with ELLs, three primary and distinct areas were delineated that are vital to address when implementing RtI with ELLs: (1) culturally responsive educational systems composed of interculturally sensitive practitioners; (2) specific training of educators on implementation of RtI with ELLs; and (3) familiarity with and knowledge regarding empirically validated interventions for use with ELLs within an RtI framework. The instrument to be used as part of this investigation was carefully developed in an effort to create a "snapshot" of how school psychologists, key educators in the RtI implementation process, currently reflect upon their training (item two above) and their knowledge of interventions (item three above) for use within RtI. Furthermore, to gauge school psychologists' degree of intercultural sensitivity as it relates to culturally responsive systems (item one above), a previously developed measure of intercultural sensitivity (Chen & Starosta, 2000) was incorporated as part of the survey instrument. By exploring the responses of school psychologists to the questionnaire items, the issue of equitable implementation of RtI and preparedness within the discipline of school psychology to implement RtI can be explored.

CHAPTER 3: METHODOLOGY

Overview

The purpose of this chapter is to (a) identify the participants, (b) describe the investigator-constructed components of the questionnaire, (c) describe the ISS and its role in the questionnaire, (d) delineate the procedures utilized to assure participant anonymity, (e) discuss the procedures utilized to maximize the response rate, and (f) provide an outline of the data analysis. This research was specifically designed as an exploratory investigation to gather information regarding school psychologists' experiences and perceptions in the three areas that have been identified as critical in the equitable implementation of RtI with ELLs: training, empirical interventions, and intercultural sensitivity. Through a series of 10 research questions, analysis of the data allowed for specific conclusions to be drawn regarding (a) participants' training experiences, both at the graduate and post-graduate levels, in areas related to equitably implementing RtI; (b) participants' experiences and perceptions with interventions within an RtI framework; and (c) participants' levels of intercultural sensitivity.

Participants

As described in Chapter 2, the field of school psychology continues to play an instrumental role in the development of RtI models and in the implementation of RtI across the nation. Due to the consistent involvement of school psychologists in this arena, it is vital that this population be studied in an effort to better understand the preparedness of school psychologists in implementing RtI and, more specifically, RtI with ELLs. Due to the

demographic characteristics of the state of Florida related to ELLs (Chapter Two, p. 32) as well as the presence of a state-level RtI initiative (Florida Response to Intervention/Instruction), a sample of school psychologists that are members of the Florida Association of School Psychologists (FASP) was used as part of this research.

FASP was founded in 1957, and since then has sought to "promote and advocate for the mental health and educational development of Florida's children, youth and families in educational systems and communities; and to advance the profession of school psychology in the state" (FASP, 2009, "Our Mission"). FASP is one of the largest state organizations for school psychologists in the nation (FASP, 2009). The organization provides professional development, information and publications, legislative and regulatory representation, and regional representation. FASP membership is composed of five distinct membership categories (FASP, 2009):

1. Regular Membership is open to individuals certified by the Florida Department of Education as a school psychologist; licensed by the state of Florida; nationally certified as a school psychologist (NCSP); past-presidents of FASP; certified or licensed school psychologists who do not live or work in the state of Florida; and individuals primarily engaged in the training of school psychologists.

2. Transition Membership is open to individuals who have graduated from a school psychology program and previously held membership.

3. Student Membership is open to individuals enrolled half-time or more in a formal program leading to an advanced degree in school psychology or completing an internship in school psychology.

4. Retired Membership is open to individuals retired from employment in school psychology or related services.

5. Associate Membership is open to individuals who are not eligible for a different membership category but express support and interest in the field.

Data regarding participants' status as students of school psychology, practicing school psychologists (as well as primary place of employment), or as retired school psychologists were collected as part of the current study. Graduate students in school psychology were included in the current investigation to ensure that data from practitioners at all stages of their careers could obtained. Although it is beyond the scope of the current investigation, suggestions for future research involve conducting further analyses to determine if a linear effect exists between participants' responses and number of years as a school psychologist. The presence of graduate students in the sample may prove valuable for such future analyses.

Data were requested from FASP regarding the ethnic and gender composition of its membership for comparison to the demographic information collected as part of the current study. However, FASP does not disaggregate membership data based on ethnicity or gender (M. Murray, personal communication, June 16, 2011). Nevertheless, these data could be obtained from the Florida Department of Education, Education Information Services. According to the Florida Department of Education (2011b) EEO-5 Report data, run at the request of this researcher, for the 2010-2011 school year, the ethnic and gender demographics of school psychologists in the entire state of Florida were as follows:

1. Ethnicity: 65.84% White/Caucasian, 12.17% Black/African American, 18.86% Hispanic, 1.49% Asian, 1.49% Multi-racial, and 0.14% American Indian or Alaska Native

2. Gender: 81.07% Female, 18.93% Male

A comparison of the demographic outcomes of this investigation will be provided in the Results portion.

Once University of Central Florida Institutional Review Board (IRB) approval was obtained (08/19/2010), a research request was sent to the FASP Executive Board for review. The FASP Executive Board approved the proposed research investigation and granted permission for use of the membership directory; this permission was granted on November 19, 2010. Not all FASP members have granted permission to release their names for research purposes; thus, a database was provided to this researcher comprised of all active FASP members who granted permission to release contact information for research purposes. A total of 1,273 FASP members were included in the database provided by FASP.

Due to the originality of the questionnaire used in this study and, therefore, no pre-existing data on the questionnaire in its entirety to guide the calculation of sample size, the work of a previous researcher with the ISS was utilized to calculate an appropriate margin of error. West (2009) utilized the ISS with a population of guidance counselors and provided both a mean and standard deviation for the ISS with her work (mean = 103.5, standard deviation = 8.2). The minimum and maximum score for the ISS are 120 and 24, respectively. To obtain coverage of approximately 5-10% of the scale, a margin of error of +/- 4 was determined to be appropriate. Utilizing a margin of error of +/- 4, approximately 8.3% of the scale is covered.

Given the absence of a previous estimate of population variance to aid in calculating an appropriate sample size, Tchebysheff's Theorem was utilized. Using Tchebysheff's Theorem to estimate the largest possible population variance, or worst-case scenario, yielded a variance of 576. Using this estimated population variance and assuming a margin of error, or a Bound, of +/- 4, the minimum sample size needed was 129.46. A sample size of 130 was determined to be appropriate.

A simple random sample was obtained from the FASP database utilizing Excel 2007. The random number generator function of Excel was employed, and participant names were subsequently sorted numerically. Once randomization of participants was complete, the first 130 participants in the database were selected. A second simple random sample of 200 participants was selected in an effort to obtain a sample size large enough for statistical precision. Although best practice would have suggested sending a second wave of 130 instead of 200 questionnaires, the committee chair recommended increasing the number to 200 to enhance the probability that enough questionnaires would be returned to avoid needing a third random sample. A comprehensive summary of the procedures utilized to contact participants is provided in the Procedures section below.

Instruments/Measures

No single instrument was currently available that comprehensively measured the three primary domains that are the focus of this study. As a result, following a comprehensive review of the literature related to RtI and to RtI specifically with ELLs, the current author developed original questionnaire items related to two of the three domains (graduate/post-graduate

training/perceptions and perceptions related to implementing interventions) and was granted permission to utilize the Intercultural Sensitivity Scale (ISS) developed by Dr. Guo-Ming Chen and Dr. William Starosta (2000) as a measure of the third domain (intercultural sensitivity). The questionnaire was composed of the following five sections:

Part I: Graduate Training in School Psychology – Items 1-19

This section was divided into two sub-sections. In the first sub-section, respondents were asked to respond with *Yes/No/Don't Remember* to items related to the content of their graduate level courses (items one through nine). Items were developed based upon the research conducted as part of the literature review and are reflective of areas of training that are critical in implementing RtI with ELLs, as identified through the literature review. These areas included instruction on: culture, cultural sensitivity, cultural bias, implementation of RtI with both native English speakers and ELLs, interventions with empirical validity for native English speakers and ELLs, second language learning, and English for Speakers of Other Languages (ESOL) models.

In the second sub-section, participants were asked to respond to items related to their graduate training through a five-point Likert scale (*Strongly Agree, Agree, Neither Agree Nor Disagree, Disagree, and Strongly Disagree*) (items 10-19). Items in this section were designed to gauge respondents' perceptions of the impact of their graduate training in helping them to develop in key areas that may influence school psychologists' role in helping to implement RtI with ELLs. These variables include: culture, cultural sensitivity, cultural bias, implementation of RtI with both native English speakers and ELLs, interventions with empirical validity for native English speakers and ELLs, second language learning, and ESOL models. Items were developed

to allow data analyses for comparison between responses related to native English speakers versus ELLs; that is, certain items are individually presented with respect to native English speakers and ELLs and will allow for documentation of differences in perceptions with respect to these two student populations.

Part II: Post-Graduate Training – Items 20-38

This section closely parallels Part I of the instrument, as it addresses the same core training areas through two distinct sections; however, items reflect participants' experiences and perceptions related to post-graduate level training. Participants are asked to indicate whether they have attended training in key areas (as indicated by a *Yes/No/Don't Remember* response) (items 20-28), and are then asked to respond to items that gauge their perceptions of post-graduate training in those key areas that influence their effectiveness in implementing RtI with ELLs (items 29-38). As with Part I of the instrument, this second sub-section of Part II utilizes a five-point Likert scale. And as in Part I, certain items will allow for documentation of differences in perceptions related to native English speakers versus ELLs.

Part III: Interventions – Items 39-52

This section utilizes a five-point Likert scale (*Strongly Agree, Agree, Neither Agree Nor Disagree, Disagree, and Strongly Disagree*) to obtain information regarding school psychologists' perceptions of their own knowledge related to interventions used as part of RtI (i.e., Tier 1, 2, and 3). The items in this section are also designed to gather information about respondents' perceptions related to native English speakers and ELLs. Two open-ended items

were included asking respondents to provide examples of interventions used by the RtI team(s) at their school(s) for both native English speakers and ELLs.

Part IV: Intercultural Sensitivity Scale (ISS) – Items 53-76

The ISS was developed by Dr. Guo-Ming Chen (University of Rhode Island) and Dr. William Starosta (Howard University) as a measure of intercultural sensitivity (2000). As documented in their paper presented at the National Communication Association in Seattle, Washington in November of 2000, the ISS is significantly correlated with other related scales and appears promising as a measure of intercultural sensitivity. The ISS was selected for use as part of this proposed dissertation for several reasons. First, the items in the scale appeared appropriate for use with school psychologists. Many of the other scales explored by the current examiner were discipline-specific and contained items that were irrelevant to the practice of school psychology (such as the Cultural Competence Self-assessment Questionnaire, Service Provider Version; the Cultural Competence Checklist of the American Speech-Language-Hearing Association, and the Linguistic and Cultural Competency Self-Assessment Survey for Family PACT Providers). Second, the length of the ISS was conducive to the current study; other scales were of much greater length and would not have been able to be completed in a short interval of time, possibly creating a negative influence on response rates. Lastly, some scales were available only for purchase. Dr. Guo-Ming Chen kindly granted permission to utilize the scale free of charge with hopes of generating additional information about the use of the scale with a population of school psychologists. One of the primary recommendations related to the ISS is that it be explored for use in other populations.

Based upon their conceptualization of intercultural sensitivity, Chen and Starosta developed 73 original items representing the six elements that compose the construct, as delineated in Chapter 2 of this document: (1) self-esteem, (2) self-monitoring, (3) open-mindedness, (4) empathy, (5) interaction involvement, and (6) non-judgment (2000). Each of the 73 items was constructed as a 5-point Likert scale item. The original iteration was administered to 168 freshmen in a communication studies course. Forty-four of the 73 items were found to have a loading of greater than 0.50 and were selected for the 44-item version of the scale. The second version of the scale was subsequently administered to 414 college students. Five factors with eigenvalues of 1.00 or higher were extracted through factor analyses. The five factors accounted in total for 37.3% of the variance: (1) Interaction Engagement (22.8%), (2) Respect for Cultural Differences (5.2%), (3) Interaction Confidence (3.9%), (4) Interaction Enjoyment (3.0%), and (5) Interaction Attentiveness (2.3%). Further exploratory factor analyses generated a 24-item version reflective of these same given factors. This 24-item version was utilized as part of the current investigation. The 24-item version demonstrated high internal consistency with 0.86 and 0.88 reliability coefficients in two separate studies. Chen & Starosta (2000) also compared the 24-item version to five additional existing measures related to those constructs addressed within the ISS: the Interaction Attentiveness Scale, the Impression Rewarding Scale, the Self-Esteem Scale, the Self-Monitoring Scale, and the Perspective Taking Scale. A significant correlation existed between the ISS and all five measures. The ISS was also investigated in comparison to the Intercultural Effectiveness Scale and the Intercultural Communication Attitude Scale; correlation coefficients were 0.57 (p<.001) and 0.74 (p<.001) for the scales, respectively. Table 4 below summarizes the particular items of the scale that

correspond to each of the five factors of the ISS. It should be noted that items 2, 4, 7, 9, 12, 15, 18, 20, and 22 are reverse-coded before summing the 24 items.

The 24-item version of the ISS used as part of the current study has been shown to have strong reliability and appropriate concurrent and predictive validity (Chen & Starosta, 2000). Higher scores on the ISS suggest higher levels of sensitivity in intercultural interaction (Chen & Starosta, 2000). Suggestions regarding the ISS provided by its creators include the use of the ISS in an expanded population and additional investigation to determine what other unidentified sources may contribute to variance.

Table 3: *ISS Items and Associated Factors*

Factor	Items	# of Items
Interaction Engagement	1, 11, 13, 21, 22, 23, & 24	7 items
Respect for Cultural Differences	2, 7, 8, 16, 18, & 20	6 items
Interaction Confidence	3, 4, 5, 6, & 10	5 items
Interaction Enjoyment	9, 12, & 15	3 items
Interaction Attentiveness	14, 17, & 19	3 items
		TOTAL ITEMS: 24

Part V: Demographics – Items 77-83

The final section of the questionnaire obtains information about respondents' gender, years of experience as a school psychologist, highest degree obtained, status as Hispanic/Latino/Spanish, ethnicity, linguistic fluency, and primary work location.

Expert Review

The questionnaire was submitted to the dissertation committee for review and feedback. The committee included an expert in statistics, measurement, and research methodology; a veteran school psychologist; a former supervisor of school psychologists and current assistant principal within a large Central Florida school district; and an expert in critical factors in multicultural education. Suggestions from each committee member were incorporated into the final version of the questionnaire. In addition to expert review, a review was also conducted for consistency of wording, readability and comprehension of items, format, and visual presentation by a retired professor of English.

Psychometric Properties

It should be noted that psychometric properties, such as reliability, validity, and sensitivity to change, are not currently available for Parts I and III of the instrument used in this investigation. A discussion regarding the psychometric properties of the ISS is found in the section titled "Part IV: Intercultural Sensitivity Scale (ISS)" (p. 67). As previously indicated, this research constitutes a preliminary exploration of school psychologists' perceptions and experiences. Recommendations for future investigations will be provided.

Procedures

The Tailored Design Method (TDM) for mail survey implementation was utilized as part of this investigation (Dillman et al., 2009). According to Dillman and colleagues, the use of solid implementation procedures, such as those of the TDM, consistently produce response rates of 50-70% (2009). The TDM requires careful planning and use of specifically designed materials (Dillman et al., 2009). Each of the TDM's 15 guidelines to mail survey implementation (Dillman et al., 2009) was directly addressed through the procedures of this investigation.

In accordance with the TDM's guidelines one and two, all correspondence was personalized to the greatest extent possible, and a token of appreciation was included with the survey request. Multiple contacts were utilized to encourage a response; a summary of each of the five contacts used as part of this investigation will be provided subsequently (guideline three). All contacts were carefully and strategically timed, and mail-out dates were selected with the characteristics of school psychologists' schedules in mind (guidelines four and five, respectively). Critical information and directions were carefully placed on the correspondence, and envelopes were personalized to the greatest extent possible to help ensure that the envelopes were not mistaken for junk mail (guidelines six and seven, respectively). In accordance with guidelines eight, nine and ten, the size and weight of the mailings was evaluated, the package was assembled carefully and with the most salient features in mind, and all addresses were in compliance with current postal regulations. Anonymity of responses was assured through the use of a stamped, self-addressed postcard that the respondent was asked to return separately from the questionnaire to indicate that the questionnaire had been returned (guideline eleven).

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Guidelines twelve and thirteen are concerned with undeliverable mail and returned incentives. Undeliverable mail was forwarded if a forwarding address was provided by the postal service, and future correspondence was sent to the updated address. If no forwarding address could be located, the returned envelope was kept for record-keeping purposes. Incentives were returned in five instances. Following guideline fourteen, any respondent inquiries were documented on an Excel spreadsheet to be addressed as appropriate. Finally, in accordance with guideline fifteen, early returns were evaluated for any problems with printing, postage, and address and return labels; no concerns were noted in the early returns.

Pre-notice Letter

Dillman and colleagues (2009) indicate that a pre-notice letter increases response rates in mail surveys by three to six percentage points. The pre-notice letter serves to provide the potential participants notice that they will be receiving a request to participate in the mail. It also serves as a brief introduction of the investigator and provides a summary of the purpose of the research. The pre-notice letter for the first group of participants was mailed on January 1, 2011. The pre-notice letter for the second group of participants was mailed on March 1, 2011. See Appendix A.

Questionnaire Mailing

The questionnaire mailing should be composed of the questionnaire itself, a cover letter, a postage-paid return envelope, and a token incentive, if one is being used. The purpose of the cover letter is to engage the participants, communicate what they are being asked to do, provide

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specific directions for completion, and explain what benefit will come from participation (Dillman et al., 2009). In the current study, the cover letter also served to provide the participants with the critical information needed for them to make an informed decision about their participation in the study. The letter also contained documentation of UCF IRB approval and contact information for the faculty advisor. Due to the nature of this investigation, written informed consent was not required.

The questionnaire packet included a monetary token incentive for participation. Dillman and colleagues (2009) report that the most appropriate incentives range from $1 to $5. For the first mailing, a $2 bill was included as the incentive. For the second mailing, a $1 bill was included as the incentive. Although best practices would indicate that the incentive should have remained the same for both mailings, financial constraints precluded the use of a greater amount in the second round of mailings.

The questionnaire mailing also included a postcard designed to allow for anonymity of responses. Participants were asked to mail their questionnaire, which had no identifying marks whatsoever, in the postage-paid return envelope. On the postage-paid postcard, participants were asked simply asked to write their name. By sending the postcard, participants' names would be removed from the list for future mailings. Participants were instructed to return a blank questionnaire in the prepaid envelope if they preferred not to participate in the research; no blank questionnaires were returned. The questionnaire packets for the two samples were mailed on January 10, 2011 and March 10, 2011, respectively. See Appendices B, C, and G.

Thank You Postcard

The purpose of the thank you postcard is to thank those individuals who may have already returned the questionnaire and to provide a prompt or reminder to those who have not yet responded (Dillman et al., 2009). The thank you postcards for the two samples were mailed on January 15, 2011 and March 15, 2011, respectively. See Appendix D.

Replacement Questionnaire

The replacement questionnaire mailing should be sent approximately three weeks after the thank you postcard to those individuals whose names have not yet been removed from the list as a result of the return of the postage-paid postcard (Dillman et al., 2009). The replacement questionnaire mailing for this study was composed of a follow-up letter distinct from the original cover letter, the replacement questionnaire, a postage-paid envelope, and postage-paid postcard for the purposes of maintaining anonymity. The follow-up letter was drafted using the guidelines provided by Dillman and colleagues (2009). The replacement questionnaire packets were sent on January 24, 2011 and March 24, 2011, respectively. See Appendices C, E, and G.

Final Contact

The final contact constitutes the last attempt to obtain participation from those individuals in the sample that have not yet returned the postage-paid postcard. It is critical that the final contact differ from previous contacts in package, mode of delivery, or speed of delivery (Dillman et al., 2009). For the purposes of this investigation, the recipient address on the envelope for the

final contact was written by hand in blue ink, rather than printed on a label, as had been done for the previous two mailings of the questionnaire. The final contact package also contained a third and distinct letter to the individual, a postage-paid return envelope, and a postage-paid postcard for the assurance of anonymity. The final contact packages were mailed on February 7, 2011 and April 7, 2011, respectively. See Appendices C, F, and G.

Questionnaire Returns

An Excel 2007 spreadsheet with the participants' names and contact information was maintained for each of the two random samples. Participants' names within each random sample were alphabetized for ease of reference upon receipt of the postage-paid postcard included in the mailings. Questionnaires and the postcard were returned to the investigators' home address. Upon the receipt of a postcard, the individual's name was highlighted within the spreadsheet, and no further correspondence (aside from the thank you postcard) was sent. Completed questionnaires were housed in three-ring binders and kept in a locked filing cabinet in the investigator's home office.

Data were kept on the number of questionnaires received following each "wave" of mailings. Table 3 below documents the quantity of complete questionnaires received following each mailing date. It should be noted, however, that it is not possible to determine definitively whether a given questionnaire originated from a specific mailing, as identifying marks of any kind were not used on the questionnaire so as to assure participants of their anonymity. Nonetheless, it is clearly evident that the bulk of responses were received subsequent to the first mailing and the thank you postcard.

Table 4: *Questionnaire Returns & Response Rates*

Mailing & Date	Number of Returns	Response Rate
Pre-notice Letter January 1, 2011 & March 1, 2011	Pre-notice letter alone sent to participants.	N/A
Questionnaire Mailing January 10, 2011	25 of 130	19.23%
March 10, 2011	29 of 200	14.50%
Thank You Postcard January 15, 2011	31 of 130	23.85%
March 15, 2011	43 of 200	21.50%
Replacement Mailing January 24, 2011	12 of 130	9.23%
March 24, 2011	5 of 200	2.50%
Final Contact February 7, 2011	3 of 130	2.31%
April 7, 2011	0 of 200	0%
Random Sample 1 Total Response Rate	71 of 130	54.66%
Random Sample 2Total Response Rate	77 of 200	38.50%
Combined Response Rate Sample 1 & 2	148 of 330	44.85%

Data Entry and Analysis

Data entry was completed on a weekly basis using SPSS Statistics version 17.0. The database was kept on a password-protected computer and backed up on a password-protected laptop. Data entry was fully complete by June 15, 2011. SPSS version 17.0 was utilized for all data analysis. Due to the number of research questions and varying types of analysis employed, each research question and its associated analysis, presented in italic font, are listed subsequently:

Intercultural sensitivity – Items 53-76

1. What is the degree of intercultural sensitivity of school psychologists surveyed, as measured by the total score on the ISS? *Group statistics were calculated to obtain a mean and standard deviation.*

    o Are there differences in degree of intercultural sensitivity (total score) based upon demographic variables (gender, number of years as a school psychologist, highest degree completed, reported status as Hispanic/Latino/Spanish, reported ethnic category, linguistic fluency, and primary place of employment)? *Because the difference in means (dependent variable) between demographic groups (independent variables) was being analyzed, both independent samples t tests and Analysis of Variance (ANOVA) were utilized. Independent samples t tests were conducted for those demographic items with only two groups (gender, status as Hispanic/Latino/Spanish, and linguistic fluency). Analyses of Variance (ANOVAs) were conducted for all other demographic variables.*

2. Do the data from the ISS as used in the current study confirm the five-factor structure identified by the authors of the ISS? *The dimensionality of the 24 items on the ISS was analyzed using principal components factor analysis. Principal components analysis can be used to find optimal ways of combining variables into a smaller number of subsets (University of Wisconsin-Madison, 2010). These factors can assist in identifying constructs of a theory that allow us to better understand behavior (Green & Salkind, 2008). The analysis is further described in the Results section.*

3. What proportion of school psychologists surveyed report having received graduate-level training in the areas addressed on the questionnaire [culture, cultural sensitivity, and cultural bias; RtI implementation; empirically-based interventions for use with RtI; second language learning; and English for Speakers of Other Languages (ESOL) programming] (items 1-9)? *Frequencies were calculated for all responses.*

   o Are any notable differences present between responses to items that juxtapose training for implementation of RtI with native English speakers versus ELLs (items 4/5 and 6/7)? *Frequencies were observed for appropriate items. Narrative observations were developed.*

4. What are school psychologists' perceptions about the impact of their graduate training on the areas addressed on the questionnaire (culture, cultural sensitivity, and cultural bias; RtI implementation; empirically-based interventions for use with RtI; second language learning; and ESOL programming) (items 10-19)? *Frequencies were calculated for all responses.*

   o Are any notable differences present between responses to paired items that specifically juxtapose perceptions related to training experiences on RtI with native English speakers versus ELLs (items 14/15 and 16/17)? *A one-way repeated-measures ANOVA was completed. The Results section contains a discussion on the use of Likert items as interval data as well as the rationale for the use of a repeated-measures analysis for this data.*

5. What proportion of school psychologists surveyed report having received post-graduate training in the areas addressed on the questionnaire (culture, cultural sensitivity, and cultural bias; RtI implementation; empirically-based interventions for use with RtI; second language learning; and ESOL programming) (items 20-28)? *Frequencies were calculated for all responses.*

   o Are any notable differences present between responses to items that juxtapose training for implementation of RtI with native English speakers versus ELLs (items 23/24 and 25/26)? *Frequencies were observed for appropriate items. Narrative observations were developed.*

6. What are school psychologists' perceptions about the impact of their post-graduate training experiences on the areas addressed on the questionnaire (culture, cultural sensitivity, and cultural bias; RtI implementation; empirically-based interventions for use with RtI; second language learning; and ESOL programming) (items 29-38)? *Frequencies were calculated for all responses.*

   o Are any notable differences present between responses to paired items that specifically juxtapose perceptions related to training experiences on RtI with native English speakers versus ELLs (items 33/34 and 35/36)? *A one-way repeated-measures ANOVA was completed. See page 78 for a discussion on this analysis.*

<u>Perceived Knowledge of Empirical Interventions and Research Analysis – Items 39-52</u>

7. To what degree do respondents report being confident in the areas addressed on the questionnaire that relate to knowledge of, experience with, and implementation of interventions within an RtI framework (items 39-50)? *Frequencies were calculated for all responses.*

   o Are any notable differences present between responses to paired items that specifically juxtapose perceptions related to training experiences on RtI with native English speakers versus ELLs (items 41/42, 43/44, 47/48, 49/50)? *A one-way repeated-measures ANOVA was completed. The reader may reference the Results section for a discussion on the use of this analysis.*

8. What themes, ideas, and patterns are noted in participants' free responses to two items asking them to provide examples of academic interventions for use with native English speakers and with ELLs (items 51 and 52)? *All responses were individually recorded and reviewed. Observations were made regarding the most common interventions provided for both native English speakers and ELLs. The What Works Clearinghouse (WWC) (n.d.) was referenced informally for information regarding the interventions provided by participants; general observations were made in reference to the information provided by the WWC. General patterns of responding were observed, and any additional comments provided were included in the qualitative analysis.*

CHAPTER 4: RESULTS

The purpose of this chapter is to present the outcomes of the analyses related to each research question. This chapter is organized according to the eight individual research questions for clarity and continuity. For research questions focused on the frequency of responses, the valid percent provided by SPSS is reported. The researcher selected the use of the "valid percent" over the "percent" (which includes missing data) in order to observe the response pattern of those individuals who *did* answer the items. The frequency of missing responses is, however, listed for informational purposes. For research questions Four, Six, and Seven, both partial η^2 and Cohen's d are provided as estimates of effect size. Cohen's d was calculated in an effort to provide additional information as well as to increase the ease of interpretation of the effect size based upon Cohen's (1988) effect size interpretation suggestions.

Likert Measures: Interval Level Data and Repeated Measures Analysis

As reflected in Chapter Three, portions of the questionnaire used in this study (specific pairs of Likert items that juxtapose native English speakers with ELLs) were analyzed using a one-way repeated measures ANOVA. In using this analysis, Likert items are assumed to function as interval level data. It is often argued that a Likert measure, such as the one employed in portions of the current instrument, can be statistically treated as interval level because underlying the scale is an attribute that is itself continuously distributed (Likert, 1932, as cited in Riconscente & Romeo, 2010). The very premise for Thurstone's use of factor analysis is that items may be treated as intervally scaled (Thurstone, 1928, as cited in Barnette, 2010). It is not

uncommon for well-known psychometricians to operate as if attitude scales are capable of producing interval data (Lord & Novick, 1968). Therefore, using this rationale and recognizing that means and standard deviations have a place in summarizing responses to the items on the "Response to Intervention & English Language Learners: A Survey of School Psychologists" measure developed as part of this study, the scale item data were treated as interval.

The paired Likert items in the questionnaire (Table 5) were analyzed using one-way repeated-measures ANOVA. With one-way repeated-measures designs, each individual subject in a study is exposed to every level of a qualitative variable and measured during each exposure to the said variable (Green & Salkind, 2008). The qualitative variable is known as the repeated-measures or within-subjects factor, and the quantitative variable is considered the dependent variable (Green & Salkind, 2008). Repeated measures designs are intended to compare the same measure under two or more different conditions (Green & Salkind, 2008).

The paired items (Table 5) in the questionnaire were treated as a repeated measure based on the following suppositions: (1) The scales for each item were the same, a five-point Likert scale; (2) The paired items were structurally identical with the exception of critical language that distinguished the two items, specifically the words "native English speaker" as compared to "English language learner;" and (3) The items were presented one right after the other, allowing for a clear juxtaposition of the items. The identical wording of the paired items functioned as the qualitative variable or within-subjects factor, while the juxtaposed wording ("native English speaker" versus "English language learner") functioned as the two distinct levels of this independent variable. For these paired items, then, we see that each participant is measured twice for each level of the qualitative variable. Based upon the three criteria presented above, it

can be assumed that a statistically significant difference in mean responses can be attributable to the verbal content that is varied. Results of these specific analyses are presented within each corresponding section that follows.

Table 5: *Repeated Measures Paired Items*

Paired Questions	Level 1	Level 2
Question 14 & 15	Q 14 I believe that my graduate training prepared me to effectively participate in the RtI process for students *whose native language is English.*	Q 15 I believe that my graduate training prepared me to effectively participate in the RtI process for *English language learners.*
Question 16 & 17	Q 16 I believe that my graduate training provided comprehensive instruction on empirically validated interventions *for native English speakers* for implementation as part of RtI.	Q 17 I believe that my graduate training provided comprehensive instruction on empirically validated interventions *specifically designed for English language learners* for implementation as part of RtI.
Question 33 & 34	Q 33 I believe that post-graduate training opportunities have prepared me to effectively participate in the RtI process for students *whose native language is English.*	Q 34 I believe that that post-graduate training opportunities have prepared me to effectively participate in the RtI process for *English language learners.*
Question 35 & 36	Q 35 I believe that post-graduate training opportunities have provided a comprehensive review of interventions empirically validated on *native English speakers* for implementation as part of RtI.	Q 36 I believe that post-graduate training opportunities have provided a comprehensive review of interventions empirically validated on *English language learners* for implementation as part of RtI.
Question 41 & 42	Q 41 I am confident in my knowledge of empirically validated interventions *for native English speakers* used at my work location(s) as part of Tier 2 of RtI.	Q 42 I am confident in my knowledge of interventions *specifically* designed (empirically validated) for use with *English language learners* at my work location as part of Tier 2 of RtI.
Question 43 & 44	Q 43 I am confident in my knowledge of interventions *for native English speakers* used at my work location(s) as part of Tier 3 of RtI.	Q 44 I am confident in my knowledge of interventions *specifically* designed (empirically validated) for use with *English language learners* at my work location as part of Tier 3 of RtI.
Question 47 & 48	Q 47 I am confident in my ability to analyze research to determine if an intervention has been empirically validated for use with *native English speakers* within RtI.	Q 48 I am confident in my ability to analyze research to determine if an intervention has been empirically validated for use *with English language learners* within RtI.
Question 49 & 50	Q 49 I am confident in the breadth of my knowledge of interventions for *native English speakers* for use with RtI.	Q 50 I am confident in the breadth of my knowledge of interventions for *English language learners* for use with RtI.

Participants

A total of 148 school psychologists participated in the current study. Tables five through 11 present the frequency and valid percent for each of the demographic variables measured: gender, number of years of practice, highest degree obtained, status as Hispanic/Latino/Spanish, ethnicity, linguistic fluency, and primary place of employment. It is important to demonstrate that the participants in the current study are a representative sample of school psychologists in the state of Florida. As previously indicated, to this aim, demographic data on the gender and ethnic characteristics of school psychologists in the state were obtained from the Florida Department of Education (Florida Department of Education, 2011b). A direct comparison will be made between the data for participants in this study and the data provided by the state for the relevant variables; state of Florida data will be included in the appropriate tables for comparison purposes.

Approximately 18% of the participants in this study were male, and approximately 82% were female (Table 6). These results are highly consistent with data from the Florida Department of Education on the gender of school psychologists in the state of Florida (18.9% male, 81.1% female) (Florida Department of Education, 2011b). It can be said that in terms of gender, the sample of school psychologists in the current study mirrors the gender division among school psychologists at the state level.

Table 6: *Gender of Participants*

Category	Frequency	Valid Percent	Florida Data
Male	26	18.2	18.9%
Female	117	81.8	81.1%
Missing Data	5	--	--
Total	148	100%	100%

Tables seven and eight note the professional and educational experiences of participants. Fifty percent of those surveyed report having 11 or more years of experience in the field of school psychology. Over half report having obtained a Specialist degree in the field (approximately 57%). Of those school psychologists surveyed who have completed a doctoral degree, 50% have obtained this degree in school psychology and 50% in a different discipline, such as educational leadership, clinical psychology, or counseling.

Table 7: *Number of Years of Practice of Participants*

Category	Frequency	Valid Percent
Graduate Student in School Psychology	24	16.3
Less than 1 Year	7	4.8
1-3 Years	22	15.0
4-7 Years	20	13.6
8-10 Years	11	7.5
11-15 Years	18	12.2
16-20 Years	10	6.8
21-30 Years	17	11.6
More than 30 Years	18	12.2
Missing Data	1	--
Total	148	100%

Table 8: *Highest Degree of Participants*

Category	Frequency	Valid Percent
Currently in Graduate School for School Psychology	23	15.5
Master's	18	12.2
Specialist	85	57.4
Doctoral	22	14.9
Missing Data	0	--
Total	148	100%

Approximately 13% of participants identified themselves as Hispanic, Latino, or of Spanish descent (Table 9); this percentage can be compared to Florida Department of Education (2011b) statistics indicating that 18.86% of school psychologists in the state of Florida are classified as Hispanic. Approximately 9.5% and 86.5% of participants identified themselves as Black/African American or White/Caucasian, respectively; these percentages can be compared with the Florida Department of Education (2011b) statistics of 12.17% Black/African American and 65.84% White/Caucasian (Table 10). It should be noted that for the current study, in accordance with the 2010 U.S. Census demographic categorization, Hispanic/Latino/Spanish was not considered a ethnic category; the discrepancy in percentage of White/Caucasian between the participants of this study and Florida Department of Education data may be in part attributable to this categorization variable. That is, school psychologists at the state level are classified as either Hispanic *or* White/Caucasian (or any other ethnicity), while participants in this study may be classified as Hispanic *and* White/Caucasian (or any other ethnicity). The categorization scheme employed in this study is consistent with the fact that Hispanics may be of any ethnicity (Grieco & Cassidy, 2001). Less than one percent of participants in the current study identified themselves as Asian or Pacific Islander; approximately 1.5% of school psychologists in the state of Florida are identified as Asian (2011b).

Table 9: *Status as Hispanic/Latino/Spanish of Participants*

Category	Frequency	Valid Percent	Florida Data
Yes	19	12.8	--
No	129	87.2	--
Missing	0	--	--
Total	148	100%	18.9%

Table 10: *Ethnicity of Participants*

Category	Frequency	Valid Percent	Florida Data*
Asian	1	0.7	1.5
Black/African American	14	9.5	12.2
Pacific Islander	1	0.7	--
White/Caucasian	128	86.5	65.8
Ethnicity Not Listed	2	1.4	--
Prefer Not to Respond	2	1.4	--
Missing	0	--	--
Total	148	100%	--

*Additional state of Florida data includes: 1.49% Multi-racial, 0.14% American Indian or Alaska Native

Approximately 18% of participants report speaking more than one language fluently (Table 11). Of those who report speaking a language other than English fluently, almost 80% speak Spanish in addition to English. Other languages reported by participants include French, German, and Turkish. One participant reported speaking more than three languages.

Table 11: *Multi-Linguistic Fluency of Participants*

Category	Frequency	Valid Percent
Yes	27	18.2
No	120	81.1
Missing	1	--
Total	148	100%

Almost 70% of participants reported working in the K-12 school system (Table 12). Of the remaining participants, approximately 50% reported being in graduate school and 50% in a different setting, such as a private practice, hospital, or alternative therapeutic center.

Table 12: *Primary Place of Employment of Participants*

Category	Frequency	Valid Percent
Currently in Graduate School for School Psychology	21	14.2
K-12 School System	102	68.9
University System	7	4.7
Private Practice	8	5.4
Other	10	6.8
Missing	0	--
Total	148	100%

Research Question One

What is the degree of intercultural sensitivity of school psychologists surveyed, as measured by the total score on the ISS? Are there differences in degree of intercultural sensitivity (total score) based upon demographic variables (gender, number of years as a school psychologist, highest degree completed, reported status as Hispanic/Latino/Spanish, reported ethnic category, linguistic fluency, and primary place of employment)?

A total ISS score was obtained for 146 of the 148 participants in the study. The mean ISS score was 100.18, with a standard deviation of 8.92. The results of the current study are similar in nature to those of the work of West (2009) in her investigation utilizing the ISS with guidance counselors (mean of 103.50 and standard deviation of 8.20).

Independent samples t tests were conducted to determine whether statistically significant differences in mean ISS scores were noted for the demographic variables of gender, status as Hispanic/Latino/Spanish, and linguistic fluency (Table 13). Levene's Test for Equality of Variances was not statistically significant for any of the demographic variables; η^2 was calculated using the formula $\eta^2 = SS_B/SS_T$. The test was statistically significant for both status as Hispanic/Latino/Spanish and linguistic fluency, $t(144) = 2.18$, $p = .006$, $\eta^2 = 0.052$ and $t(143) = 3.25$, $p = .001$, $\eta^2 = 0.067$, respectively. Participants who identified themselves as Hispanic/Latino/Spanish as well as those who reported speaking more than one language fluently demonstrated statistically significantly higher scores on the ISS. The η^2 indices indicate that 5.2% and 6.7% of the variance, respectively, can be explained by a participant's status as Hispanic/Latino/Spanish and their linguistic fluency. Based upon Cohen's (1988) suggestion that d = 0.2 be considered a "small" effect size, 0.5 a "medium" effect size, and 0.8 a "large" effect size, the η^2 values identify a small association; this indicates that the difference in mean ISS score between those who responded "Yes" to the demographic variables of Hispanic/Latino/Spanish and linguistic fluency and those who responded "No" is relatively small albeit significant. It should be noted that statistical significance with respect to these two demographic variables was detected even with Bonferroni correction of the alpha. (Three independent samples t tests were conducted with a directional hypothesis, yielding a Bonferroni corrected alpha of .05/3, or .0167.) The test was not statistically significant for gender, t(140) = -.885, p = .38. Results are consistent with the hypothesis that those participants who identified themselves as Hispanic/Latino/Spanish and/or as fluent in more than one language would demonstrate higher scores on the ISS.

Table 13: *Summary of Independent Samples t Tests: ISS and Gender, Status as*

Hispanic/Latino/Spanish, and Multi-Lingual Fluency

Demographic Category					*t* test	
	M	SD	M	SD	*t*	df
Gender	Male		Female			
	98.96	9.12	100.67	8.87	-.885	140
Hispanic/Latino/Spanish	Yes		No			
	105.42	6.67	99.39	8.97	2.81*	144
Linguistic Fluency	Yes		No			
	104.93	7.10	98.97	8.89	3.25*	143

*p < .01

One-way analyses of variances (ANOVAs) were conducted to evaluate the relationship between total score on the ISS and the remaining demographic variables: years of experience, highest degree obtained, ethnicity (not including Hispanic), and primary place of employment (Table 14). The ANOVAs were not statistically significant for any of these variables: years of experience, $F(8, 136) = .759$, p = .639; highest degree obtained, $F(4, 141) = 1.29$, p = .277; ethnicity, $F(5, 140) = .40$, p = .85; and primary place of employment, $F(4, 141) = .398$, p = .81. Results are consistent with the hypothesis that years of experience, highest degree obtained, and primary place of employment would not be associated with statistically significantly higher scores on the ISS. Results are not consistent with the hypothesis that statistically significantly discrepant scores would be noted between ethnic categories.

Table 14: *Summary of ANOVAs: ISS and Years of Experience, Highest Degree, Ethnicity, and Primary Place of Employment*

Demographic Category	Sum of Squares Between (SS_B)	Sum of Squares Within (SS_W)	Mean Square Between	Mean Square Within	$F(df_B, df_W)$
Years of Experience	484.56	10846.41	60.57	79.75	.759(8,136)
Highest Degree	407.01	11126.36	101.75	78.91	1.289(4, 141)
Ethnicity	162.47	11370.90	32.50	81.22	.400(5, 140)
Primary Place of Employment	128.70	11404.67	32.17	80.88	.398(4, 141)

Research Question Two

Do the data from the ISS as used in the current study confirm the five-factor structure identified by the authors of the ISS?

The purpose of this analysis was to explore the factor structure underlying the items in the ISS. Factor analysis has, as its key objective, reducing a larger set of variables to a smaller set of factors, fewer in number than the original variable set, but capable of accounting for a large portion of the total variability in items. The identity of each factor is determined after a review of which items correlate the highest with that factor. Items that correlate the highest with a factor define the meaning of the factor as judged by what conceptually ties the items together. A successful result is one in which a few factors can explain a large portion of the total variability, and those factors can be given a meaningful name using the assortment of items that correlate the highest with it.

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In the context of this study, when success is attained, it can be said that there is validity evidence supporting the conclusion that the scores from the ISS are a valid assessment of a person's intercultural sensitivity. One can be confident that summing responses to individual items to obtain a total score is representative of the overall concept of intercultural sensitivity. This kind of validity evidence is called internal structure evidence because it suggests that items line up in a predictable manner, according to what thematically ties them together conceptually. The descriptive statistics of the item responses are presented in Table 15. It may be observed that the standard deviations are smaller than the respective means and that no one standard deviation stands out upon gross observation as remarkably larger than the other variables.

Table 15: *ISS Factor Analysis Descriptive Statistics*

	Mean	Std. Deviation	Analysis N
Q1 I enjoy interacting with people from different cultures.	4.64	.524	146
Q2 I think people from other cultures are narrow-minded.	4.34	.709	146
Q3 I am pretty sure of myself in interacting with people from different cultures.	4.13	.697	146
Q4 I find it very hard to talk in front of people from different cultures.	4.26	.734	146
Q5 I always know what to say when interacting with people from different cultures.	3.01	.801	146
Q6 I can be as sociable as I want to be when interacting with people from different cultures.	3.85	.817	146
Q7 I don't like to be with people from different cultures.	4.56	.551	146
Q8 I respect the values of people from different cultures.	4.60	.518	146
Q9 I get upset easily when interacting with people from different cultures.	4.58	.523	146
Q10 I feel confident when interacting with people from different cultures.	4.09	.674	146
Q11 I tend to wait before forming an impression of culturally-distinct counterparts.	3.92	.744	146
Q12 I often get discouraged when I am with people from different cultures.	4.24	.708	146
Q13 I am open-minded to people of different cultures.	4.43	.524	146
Q14 I am very observant when interacting with people from different cultures.	4.08	.738	146
Q15 I often feel useless when interacting with people from different cultures.	4.23	.665	146
Q16 I respect the ways people from different cultures behave.	4.28	.641	146
Q17 I try to obtain as much information as I can when interacting with people from different cultures.	4.14	.743	146
Q18 I would not accept the opinions of people from different cultures.	4.49	.687	146
Q19 I am sensitive to my culturally-distinct counterpart's subtle meanings during our interaction.	3.79	.796	146
Q20 I think my culture is better than other cultures.	4.12	.846	146
Q21 I often give positive responses to my culturally different counterpart during our interaction.	3.90	.698	146
Q22 I avoid those situations where I will have to deal with culturally-distinct persons.	4.40	.638	146
Q23 I often show my culturally-distinct counterpart my understanding through verbal or nonverbal cues.	4.02	.604	146
Q24 I have a feeling of enjoyment towards differences between my culturally-distinct counterpart and me.	4.08	.686	146

The principal components estimation procedure was used to extract factors from the variable data. According to Hatcher (2003), one of the initial steps in conducting a principal components analysis involves determining the number of "meaningful" components to retain. One key method of determining the most appropriate solution relies on a careful analysis of the scree plot of eigenvalues, which measure the variance in all the variables accounted for by a given factor (Factor Analysis, n.d.). The analysis of the scree plot yields accurate results with more frequency than other methods (Green & Salkind, 2008). Low eigenvalues indicate that a factor is contributing little in explaining the variance among variables and may be seen as redundant to other more important factors with higher eigenvalues (Factor Analysis, n.d.). Figure 2 presents the scree plot for the principal components estimation conducted with the ISS data.
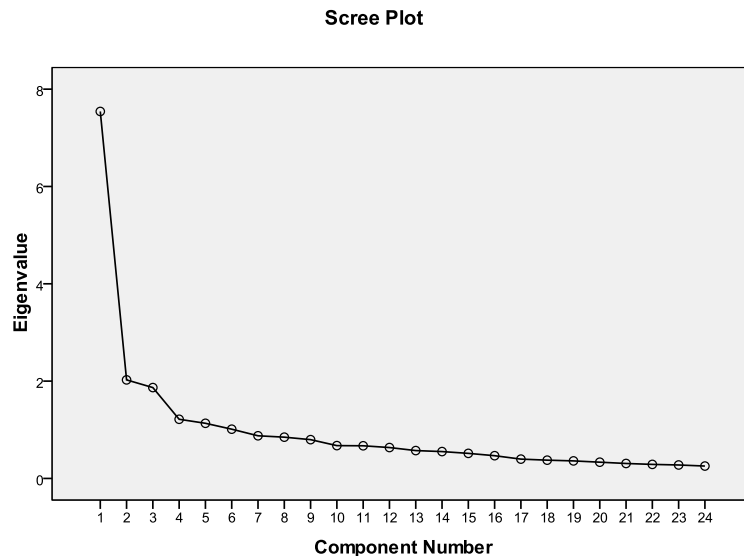
Scree Plot

Figure 2: *Scree Plot of Eigenvalues for ISS Factor Analysis*

In analyzing the scree plot, one can employ the "scree test" (Cattell, 1966), which involves looking for a break between components with relatively large eigenvalues and those with comparatively smaller eigenvalues. Those components appearing before the break are determined to be meaningful and are retained for rotation, while those after the break are assumed to be unimportant and are not retained (Hatcher, 2003). In analyzing the scree plot for the ISS data (Figure 2), the dogleg of the plot is indicative of one predominant factor, which is consistent with the interpretation that the total score on the ISS is measuring one over-arching construct, intercultural sensitivity. Based upon the inspection and analysis of the scree plot, further interpretation for the purposes of this investigation will be based upon a one-factor solution; that is, the data were re-examined using principal component analysis with a forced one-factor solution. Table 16 documents the total variance explained by the one-factor solution.

Table 16: *ISS Factor Analysis Total Variance Explained*

		Initial Eigenvalues		Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	7.542	31.423	31.423	7.542	31.423	31.423	4.980
2	2.026	8.440	39.863				
3	1.867	7.780	47.643				
4	1.216	5.066	52.709				
5	1.133	4.722	57.431				
6	1.012	4.218	61.649				
7	.877	3.652	65.301				
8	.848	3.534	68.835				
9	.797	3.322	72.157				
10	.675	2.811	74.967				
11	.671	2.796	77.764				
12	.635	2.646	80.409				
13	.573	2.386	82.795				
14	.552	2.300	85.095				
15	.515	2.147	87.242				
16	.467	1.947	89.190				
17	.397	1.655	90.844				
18	.376	1.565	92.410				
19	.360	1.501	93.911				
20	.334	1.392	95.303				
21	.307	1.281	96.584				
22	.289	1.202	97.786				
23	.277	1.152	98.939				
24	.255	1.061	100.000				

Extraction Method: Principal Component Analysis.

It can be noted that the one-factor solution accounts for 31.4% of the total variance. As previously noted, the five-factor solution in Chen and Starosta's (2000) analysis accounted for 37.3% of the variance. Thus, although the data on the ISS for this investigation support a one-factor solution, indicating the presence of a singular over-arching construct, the total amount of

variance explained is similar to that of Chen and Starosta's five-factor solution. Although Chen and Starosta have identified five underlying factors measured by the ISS in their research populations, the ISS is in fact designed to measure these specific components of a singular umbrella construct, intercultural sensitivity.

It should be noted that it is important to inspect that table of communalities as part of the interpretation process. Communalities are interpreted like Multiple R^2 in multiple regression. Communalities indicate the degree to which the factors explain the variance of the variables. Ill-conditioned data can yield communalities that are greater than 1.00, which is theoretically impossible because explaining more than 100% of a variable's variance is not possible. In this study, the communalities were acceptable. In fact, the communalities suggest that the variables are contributing a large amount to the underlying variation in the principal components. Table 17 documents the communalities for this analysis.

Table 17: *ISS Factor Analysis Communalities*

Communalities		
	Initial	Extraction
Question 1	1.000	.366
Question 2	1.000	.316
Question 3	1.000	.253
Question 4	1.000	.334
Question 5	1.000	.121
Question 6	1.000	.182
Question 7	1.000	.417
Question 8	1.000	.379
Question 9	1.000	.481
Question 10	1.000	.326
Question 11	1.000	.091
Question 12	1.000	.310
Question 13	1.000	.325
Question 14	1.000	.208
Question 15	1.000	.369
Question 16	1.000	.471
Question 17	1.000	.305
Question 18	1.000	.306
Question 19	1.000	.315
Question 20	1.000	.377
Question 21	1.000	.355
Question 22	1.000	.361
Question 23	1.000	.147
Question 24	1.000	.430
Extraction Method: Principal Component Analysis.		

Another key component of the SPSS output to explore is the component matrix of factor

loadings for the one-factor analysis conducted (Table 18). In looking at the factor loadings,

which range from .302 to .694, it is important to decide what constitutes a significant loading for

this particular data set. As the ISS has not been previously investigated with school

psychologists, it is not possible to reference prior research in determining a specified cut-off

score for factor loading significance. A common rule of thumb indicates that factor loadings

greater than .30 are considered to be significant (Costello & Osborne, 2005). Such loadings of

.30 or higher are considered a good "primary" loading, and those above .45 are considered to be

even stronger (Roesch, 2007). Using a cut-off of .30, all 24 items of the ISS can be said to have

a significant loading for the single factor. Using a more conservative cut-off of .45, 20 of the 24

items of the ISS have a significant loading onto the single factor.

Table 18: *ISS Factor Analysis Component Matrix*

Component Matrix

Q9 I get upset easily when interacting with people from different cultures.	.694
Q16 I respect the ways people from different cultures behave.	.686
Q24 I have a feeling of enjoyment towards differences between my culturally-distinct counterpart and me.	.656
Q7 I don't like to be with people from different cultures.	.645
Q8 I respect the values of people from different cultures.	.616
Q20 I think my culture is better than other cultures.	.614
Q15 I often feel useless when interacting with people from different cultures.	.607
Q1 I enjoy interacting with people from different cultures.	.605
Q22 I avoid those situations where I will have to deal with culturally-distinct persons.	.601
Q21 I often give positive responses to my culturally different counterpart during our interaction.	.596
Q4 I find it very hard to talk in front of people from different cultures.	.578
Q10 I feel confident when interacting with people from different cultures.	.571
Q13 I am open-minded to people of different cultures.	.570
Q2 I think people from other cultures are narrow-minded.	.562
Q19 I am sensitive to my culturally-distinct counterpart's subtle meanings during our interaction.	.561
Q12 I often get discouraged when I am with people from different cultures.	.557
Q18 I would not accept the opinions of people from different cultures.	.553
Q17 I try to obtain as much information as I can when interacting with people from different cultures.	.552
Q3 I am pretty sure of myself in interacting with people from different cultures.	.503
Q14 I am very observant when interacting with people from different cultures.	.456
Q6 I can be as sociable as I want to be when interacting with people from different cultures.	.427
Q23 I often show my culturally-distinct counterpart my understanding through verbal or nonverbal cues.	.384
Q5 I always know what to say when interacting with people from different cultures.	.348
Q11 I tend to wait before forming an impression of culturally-distinct counterparts.	.302

Based upon the analysis of the scree plot, the factor loadings, and the similarity between the total variance explained by the single-factor solution (31.4%) and Chen and Starosta's (2000) five-factor solution (37.3%), it appears that the one-factor solution proposed through this investigation is appropriate. Given that the ISS is designed as a measure of intercultural sensitivity, the individual factor identified through the course of this analysis can be termed "intercultural sensitivity."

It was hypothesized that the results of this investigation would confirm Chen and Starosta's five-factor structure of the ISS. As explicated above, it has been determined that a one-factor solution best represents the data obtained from the use of the ISS with the participants in this study. Despite the difference in outcome from Chen and Starosta's research, the ISS appears to effectively serve its purpose in this investigation as a measure of a singular construct, intercultural sensitivity, of school psychologists in the sample. Suggestions for future analysis related to the data collected using the ISS will be made in the appropriate section of the following chapter (Chapter Five).

Research Question Three

What proportion of school psychologists surveyed report having received graduate-level training in the areas addressed on the questionnaire [culture, cultural sensitivity, and cultural bias; RtI implementation; empirically-based interventions for use with RtI; second language learning; and English for Speakers of Other Languages (ESOL) programming] (items 1-9)? Are any notable differences present between responses to items that juxtapose training for implementation of RtI as a whole versus RtI with ELLs (items 4/5 and 6/7)?

The purpose of items one through nine on the questionnaire and research question three, designed to be answered by these items, was to explore participants' reports of their graduate training in areas identified as key to the equitable implementation of RtI (Table 19). Items one, two, and three indicate that over 80% of all participants report having had coursework at the graduate level that focused on the concepts of culture (86.5%), cultural sensitivity (81.8%), and cultural bias (85.1%). Additionally, approximately 62% and 51% report having had training in second language learning and ESOL models, respectively, through their graduate coursework.

Large differences in responses are noted between items four/five and six/seven, which specify graduate level content focused specifically on RtI and RtI with ELLs. Almost 46% of participants report having had graduate course content focused on RtI as a whole, while only 16% report having had course content focused specifically on meeting the needs of ELLs within an RtI framework, a difference of 30 percentage points. Similarly, while almost 38% of participants reported having had coursework on empirically validated interventions for use within RtI in general, only 10% report having had coursework focused on empirically validated interventions specifically designed for use with ELLs, a difference of 28 percentage points.

The hypothesis that the proportion of participants reporting graduate level training in the areas addressed would be variable is supported; participants' reports for the presence of training range from a high of 86.5% (item one) to a low of 10.1% (item seven). A cluster of high affirmative (Yes) responses can be noted on items focused on the concept of culture and related attributes (items one through three). The hypothesis that a greater number of participants would report training in RtI in general versus RtI with ELLs is also supported, as noted in the response pattern for items four/five and six/seven.

Table 19: *Questionnaire Items 1-9: Presence of Graduate Level Training*

Item	Yes	No	Don't Remember
1. Did your program include course content that focused on the concept of culture?	86.5%	10.1%	3.4%
2. Did your program include course content on the development of cultural sensitivity?	81.8%	12.2%	6.1%
3. Did your program include course content on the impact of cultural bias?	85.1%	11.5%	3.4%
4. Did your program include course content on implementing Response to Intervention (RtI)?	45.9%	52.7%	1.4%
5. Did your program include course content *specifically* on meeting the needs of *English language learners* within RtI?	16.2%	77.0%	6.1%
6. Did your program include course content about empirically validated interventions for use within RtI?	37.8%	58.1%	4.1%
7. Did your program include course content *specifically* about interventions empirically validated *on English language learners* for use within RtI?	10.1%	83.1%	6.8%
8. Did your program include course content on second language learning?	61.5%	32.4%	6.1%
9. Did your program include course content on English for Speakers of Other Languages (ESOL) models?	50.7%	36.5%	12.8%

Research Question Four

What are school psychologists' perceptions about the impact of their graduate training on the areas addressed on the questionnaire (culture, cultural sensitivity, and cultural bias; RtI implementation; empirically-based interventions for use with RtI; second language learning; and ESOL programming) (items 10-19)? Are any notable differences present between responses to paired items that specifically juxtapose perceptions related to training experiences on RtI with native English speakers versus ELLs (items 14/15 and 16/17)?

The purpose of items 10 through 19 on the questionnaire and research question four, designed to be answered by these items, was to explore participants' perceptions of their graduate-level training in areas identified as key to the equitable implementation of RtI. As was hypothesized, the frequencies of participants' responses across the ten items were variable (Table 20).

For those items that address culture (10, 11, 12, and 13), a very similar response distribution pattern was noted for all four items. Approximately 30% of participants responded "Strongly Agree" on all four items (28.5% to 31.9%), approximately 45% responded "Agree" on all four items (44.4% to 45.8%), approximately 10% responded "Disagree" on all four items (9.7% to 11.9%), and approximately 2% responded "Strongly Disagree" to all four items (2.1%). Responses were slightly more variable for "Neither Agree Nor Disagree (9.7% to 15.3%). The majority of participants (73.5%, 84.9%, 75%, and 72.9%, respectively) responded "Strongly Agree" or "Agree" to this set of four items (10 through 13). It can therefore be said that the majority of participants reported that graduate training experiences have had an impact ("Strongly Agree" or "Agree") on their working knowledge of their own culture and that of others, and have influenced the development of cultural sensitivity and the identification of cultural bias.

A consistent response pattern was again noted for items 18 and 19, which address the related issues of second language learning and ESOL. Participants' responses to these two items were similar in percentage across the five possible responses. Over 50% of respondents answered "Neither Agree Nor Disagree," "Disagree," or "Strongly Disagree" to items 18 and 19. It can therefore be said that the majority of participants reported a lower influence of graduate

training in second language learning and ESOL in comparison to training in areas related to culture (items 10 through 13).

Items 14 through 17 directly address perceptions of graduate training related to RtI both with native English speakers and ELLs. It can be noted that the response with the highest percentage for each of these items was "Disagree." Thus, a difference in responding is noted between these four items and items 10 through 13, where the majority of responses (well over 50%) were "Strongly Agree" or "Agree. On items 14 through 17, the majority of responses were "Neither Agree Nor Disagree," "Disagree," or "Strongly Disagree." The response pattern noted for items 14 through 17 is similar to that of items 18 and 19, described above. A more specific analysis of items 14 through 17 is provided in a subsequent portion of this section.

Table 20: *Questionnaire Items 10-19: Perceptions of Graduate Training Experiences*

Item	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
10. I believe that my graduate training enabled me to develop a working knowledge of the role of culture in my own life.	28.7%	44.8%	12.6%	11.9%	2.1%
11. I believe that my graduate training enabled me to develop a working knowledge of the role of culture in the lives of the students with whom I work.	31.9%	45.8%	9.7%	10.4%	2.1%
12. I believe that my graduate training enhanced my development of sensitivity to the cultures of other individuals.	29.2%	45.8%	13.2%	9.7%	2.1%
13. I believe that my graduate training enhanced my ability to identify the presence of cultural bias in my own experiences.	28.5%	44.4%	15.3%	9.7%	2.1%
14. I believe that my graduate training prepared me to effectively participate in the RtI process for students *whose native language is English.*	19.6%	25.2%	15.4%	29.4%	10.5%
15. I believe that my graduate training prepared me to effectively participate in the RtI process for *English language learners.*	5.6%	15.4%	25.2%	42.0%	11.9%
16. I believe that my graduate training provided comprehensive instruction on empirically validated interventions *for native English speakers* for implementation as part of RtI.	14.1%	16.2%	14.1%	42.3%	13.4%
17. I believe that my graduate training provided comprehensive instruction on empirically validated interventions *specifically designed for English language learners* for implementation as part of RtI.	2.1%	7.7%	20.3%	50.3%	19.6%
18. I believe that my graduate training prepared me to effectively understand the process of second language learning.	11.2%	37.8%	14.0%	31.5%	5.6%
19. I believe that my graduate training prepared me to effectively understand English for Speakers of Other Languages (ESOL) models.	11.1%	32.6%	16.0%	34.0%	6.3%

Research question four also sought to determine if statistically significant differences in mean responses were noted between paired items with content that juxtaposed native English speakers and ELLs (items 14/15 and 16/17; Table 21). Items 14 and 15 inquired about participants' perceptions regarding the impact of their graduate-level training on their ability to participate in the RtI process for native English speakers (item 14) and ELLs (item 15). Items 16 and 17 inquired about perceptions regarding the comprehensiveness of graduate-level training regarding empirically-validated interventions for native English speakers (item 16) and ELLs (item 17) for implementation as part of the RtI process. The section titled "Likert Measures: Interval Level Data and Repeated Measures Analysis" at the beginning of this chapter may be referenced for additional information.

Table 21: *Repeated Measures Paired Items 14/15 and 16/17*

Paired Questions	Level 1	Level 2
Questions 14 & 15	Q 14 I believe that my graduate training prepared me to effectively participate in the RtI process for students *whose native language is English*.	Q 15 I believe that my graduate training prepared me to effectively participate in the RtI process for *English language learners*.
Questions 16 & 17	Q 16 I believe that my graduate training provided comprehensive instruction on empirically validated interventions *for native English speakers* for implementation as part of RtI.	Q 17 I believe that my graduate training provided comprehensive instruction on empirically validated interventions *specifically designed for English language learners* for implementation as part of RtI.

The means and standard deviations for responses to items 14/15 and 16/17 are presented in Table 22. A one-way repeated measures ANOVA was conducted with the factor being the change in wording between items 14/15 and items 16/17 ("native English speakers" versus "English language learners") and the dependent variable being the mean response for each item.

It should be noted that the assumption of sphericity, which is similar to the ANOVA assumptions of normality and homogeneity of variances, is the assumption that the different scores of paired levels of the repeated measures factor have equal population variances (Moulton, 2010). With respect to the current analyses, it should also be noted that the assumption of sphericity is "by definition always met for designs with only two levels of a repeated measures factor. One does not need to conduct a Mauchly test on such data" (Moulton, 2010, p. 776). Given that each repeated measures factor in the current investigation has only two levels, the assumption of sphericity has been met for all comparisons, and the "Sphericity Assumed" results of the Test of Within-Subjects Effects are reported. The reader should also note that Cohen's d was calculated using an online effect size calculator powered by the University of Colorado (http://www.uccs.edu/~faculty/lbecker/); hand calculation was used to verify the accuracy of the online calculator for two of the comparisons, resulting in identical values.

Table 22: *Items 14/15 and 16/17 Descriptive Statistics*

	Mean	Std. Deviation	N
Q 14 I believe that my graduate training prepared me to effectively participate in the RtI process for students whose native language is English.	3.14	1.319	143
Q 15 I believe that my graduate training prepared me to effectively participate in the RtI process for English language learners.	2.61	1.062	143
Q 16 I believe that my graduate training provided comprehensive instruction on empirically validated interventions *for native English speakers* for implementation as part of RtI.	2.75	1.278	142
Q 17 I believe that my graduate training provided comprehensive instruction on empirically validated interventions *specifically designed for English language learners* for implementation as part of RtI.	2.23	.920	142

The results indicated a statistically significant difference in mean responses for both pairs of items. For the comparison between items 14 and 15, results were as follows: $F(1, 142) = 44.253$, $p < .001$, Cohen's $d = 0.44$, partial $\eta^2 = .238$. The mean response on item 14, focused on native English speakers, was statistically significantly higher than the mean response on item 15, focused on ELLs. These results suggest that participants' perceive that their graduate training more effectively prepared them to participate in the RtI process with native English speakers than with ELLs. Based upon Cohen's (1988) suggestion that $d = 0.2$ be considered a "small" effect size, 0.5 a "medium" effect size, and 0.8 a "large" effect size, the effect size for this analysis can be considered to be approaching the medium range. Similarly, based upon the suggestion that a partial η^2 of .25 or higher is "moderate" and .64 or higher is "strong," the partial η^2 confirms an effect size approaching the moderate range (Ferguson, 2009). These results confirm the hypothesis that mean responses on items specified for native English speakers would be higher than for those specified for ELLs.

For the comparison between items 16 and 17, results were as follows: $F(1, 141) = 38.996$, $p < .001$, Cohen's $d = 0.46$, partial η^2 .217. The mean response on item 16, focused on native English speakers, was statistically significantly higher than the mean response on item 17, focused on ELLs. These results suggest that participants' perceive that their graduate training provided more comprehensive instruction on empirically-validated interventions for use with native English speakers within RtI than for ELLs. The effect size for this analysis is in the upper limits of the small range, according to both Cohen's d and the partial η^2. These results also confirm the hypothesis that mean responses on items specified for native English speakers would be higher than for those specified for ELLs.

Research Question Five

What proportion of school psychologists surveyed report having received post-graduate training in the areas addressed on the questionnaire (culture, cultural sensitivity, and cultural bias; RtI implementation; empirically-based interventions for use with RtI; second language learning; and ESOL programming) (items 20-28)? Are any notable differences present between responses to items that juxtapose training for implementation of RtI as a whole versus RtI with ELLs (items 23/24 and 25/26)?

Through research question five and questionnaire items 20 through 28, the researcher explored participants' reports of their post-graduate training in the last two years in areas identified as key to the equitable implementation of RtI (Table 23). These items parallel questions one through nine, which looked at participants' reports of graduate training. Items 20, 21, and 22 indicate that the majority of all participants report having training within the last two years that focused on the concepts of culture (69.4%), cultural sensitivity (61.8%), and cultural bias (59.0%). Additionally, approximately 42% and 33% report having had training in second language learning and ESOL models, respectively, within the last two years.

Large differences in responses are noted between items 23/24 and 25/26, which specify post-graduate level content focused specifically on RtI and RtI with ELLs. Over 95% of participants report having training with content focused on RtI as a whole, while only 42% report having had training content focused specifically on meeting the needs of ELLs within an RtI framework, a difference of 53 percentage points. Similarly, while 57.6% of participants reported having had training on empirically validated interventions for use within RtI in general, only

30.6% report having had post-graduate training focused on empirically validated interventions specifically designed for use with ELLs, a difference of 27 percentage points.

Participants' reports for the presence of training range from a high of 95.1% (item 23) to a low of 30.6% (item 26*).* These results support the hypothesis that the proportion of participants reporting post-graduate level training in the areas addressed would be variable. The response pattern for items 23/24 and 25/26, as discussed above, supports the hypothesis that a greater number of participants would report training in RtI in general versus RtI with ELLs.

Table 23: *Questionnaire Items 20-28: Presence of Post-Graduate Level Training*

Item	Yes	No	Don't Remember
20. In the past 2 years, have you attended at least one training that focused on the concept of culture?	69.4%	29.2%	1.4%
21. In the past 2 years, have you attended at least one training that focused on the development of cultural sensitivity?	61.8%	36.1%	2.1%
22. In the past 2 years, have you attended at least one training that focused on the impact of cultural bias?	59.0%	38.9%	2.0%
23. In the past 2 years, have you attended at least one training that focused on the implementation of RtI?	95.1%	4.9%	0%
24. In the past 2 years, have you attended at least one training that focused on the implementation of RtI *specifically with English language learners*?	41.7%	54.2%	4.2%
25. In the past 2 years, have you attended at least one training that focused on reviewing empirically validated interventions for use with *native English speakers* within RtI?	57.6%	39.6%	2.8%
26. In the past 2 years, have you attended at least one training that focused on reviewing empirically validated interventions for use with *English language learners* within RtI?	30.6%	66.0%	3.5%
27. In the past 2 years, have you attended at least one training that focused on second language learning?	42.3%	55.6%	2.1%
28. In the past 2 years, have you attended at least one training that focused on English for Speakers of Other Languages (ESOL) models?	32.6%	66.0%	1.4%

What are school psychologists' perceptions about the impact of their post-graduate training experiences on the areas addressed on the questionnaire (culture, cultural sensitivity, and cultural bias; RtI implementation; empirically-based interventions for use with RtI; second language learning; and ESOL programming) (items 29-38)? Are any notable differences present between responses to paired items that specifically juxtapose perceptions related to training experiences on RtI with native English speakers versus ELLs (items 33/34 and 35/36)?

The purpose of items 29 through 38 on the questionnaire and research question six, designed to be answered by these items, was to explore participants' perceptions of their post-graduate training in areas identified as key to the equitable implementation of RtI. These items parallel questions 10 through 19, which examined participants' perceptions of graduate training experiences in the same areas. As was hypothesized, the frequencies of participants' responses across the item set were variable (Table 24).

As with items 10 through 13 addressing graduate level training experiences, items 29 through 32 addressed the perceptions of participants regarding post-graduate training in areas related to culture. The majority of participants (71.2%, 80.8%, 76.7%, and 71%, respectively) responded "Strongly Agree" or "Agree" to these items. Thus, it can be said that the majority of participants report that post-graduate training experiences have impacted their working knowledge of their own culture and that of others, and have influenced the development of cultural sensitivity and the identification of cultural bias. The percent of participants responding "Strongly Agree" or "Agree" to these items (ranging from 71% to 80.8%) is fairly consistent

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with the percent of participants responding "Strongly Agree" or "Agree" to the parallel items that address training at the graduate level (items 10 through 13; ranging from 72.9% to 84.9%). It can therefore be said that participants reported that training experiences both at the graduate and post-graduate level have influenced their working knowledge of their own culture and that of others, and have influenced the development of cultural sensitivity and the identification of cultural bias.

As with items 18 and 19, items 37 and 38 address issues related to second language learning and ESOL. Consistent with the pattern of response to items 18 and 19, participants' responses to these two items were similar in percentages across the five possible responses. Over 50% of participants responded "Neither Agree Nor Disagree," "Disagree," or "Strongly Disagree" to items 37 and 38. It can therefore be said that the majority of participants reported a lower influence of post-graduate training in second language learning and ESOL in comparison to training in areas related to culture (items 29 through 32).

Items 33 through 36 directly address perceptions of post-graduate training related to RtI both with native English speakers and ELLs. The response pattern for these items is more variable than for the parallel items that reflect graduate level training (items 14 through 17). On items 14 through 17, the response with the highest percentage for each of the four items was "Disagree." On items 33 through 36, the response with the highest percentage of responses is variable. The majority of participants responded "Strongly Agree" or "Agree" to items 33 and 35, which inquire about post-graduate training experiences related to the implementation of RtI specifically with native English speakers (64.4% and 53.4%, respectively). On items 34 and 36, which inquire about post-graduate training experiences related to the implementation of RtI

specifically with ELLs, only 40.5% and 23.3%, respectively, responded "Strongly Agree" or

"Agree." The distribution of percentages for responses for items 34 and 36 is similar to that of

items 37 and 38, which are related to second language learning and ESOL, topics closely

associated with ELLs. A more specific analysis of items 33 through 36 is provided in a

subsequent portion of this section.

Table 24: *Questionnaire Items 29-38: Perceptions of Post-Graduate Training*

Item	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
29. I believe that post-graduate training opportunities have aided me in developing a working knowledge of the role of culture in my own life.	27.4%	43.8%	19.2%	8.9%	0.7%
30. I believe that post-graduate training opportunities have aided me in developing a working knowledge of the role of culture in the lives of the students with whom I work.	30.1%	50.7%	9.6%	8.2%	1.4%
31. I believe that post-graduate training opportunities have aided me in developing sensitivity to the cultures of other individuals.	30.8%	45.9%	15.1%	6.8%	1.4%
32. I believe that post-graduate training opportunities have aided me in identifying the presence of cultural bias in my own experiences.	24.1%	46.9%	18.6%	8.3%	2.1%
33. I believe that post-graduate training opportunities have prepared me to effectively participate in the RtI process for students *whose native language is English*.	27.4%	37.0%	20.5%	11.6%	3.4%
34. I believe that that post-graduate training opportunities have prepared me to effectively participate in the RtI process for *English language learners*.	11.0%	29.5%	25.3%	28.1%	6.2%
35. I believe that post-graduate training opportunities have provided a comprehensive review of interventions empirically validated on *native English speakers* for implementation as part of RtI.	16.4%	37.0%	17.8%	21.9%	6.8%
36. I believe that post-graduate training opportunities have provided a comprehensive review of interventions empirically validated on *English language learners* for implementation as part of RtI.	3.4%	19.9%	25.3%	40.4%	11.0%
37. I believe that post-graduate training opportunities have prepared me to effectively understand the process of second language learning.	9.6%	37.0%	25.3%	25.3%	2.7%
38. I believe that post-graduate training opportunities have prepared me to effectively understand English for Speakers of Other Languages (ESOL) models.	8.9%	30.1%	26.0%	30.8%	4.1%

Research question six also sought to determine if statistically significant differences in mean responses were noted between paired items with content that juxtaposed native English speakers and ELLs (items 33/34 and 35/36; Table 25). Items 33 and 34 inquired about participants' perceptions regarding the impact of their post-graduate training experiences on their ability to participate in the RtI process for native English speakers (item 33) and ELLs (item 34); these two items parallel questions 14 and 15 (See Research Question Four.). Items 35 and 36 inquired about perceptions regarding the comprehensiveness of post-graduate training regarding empirically-validated interventions for native English speakers (item 35) and ELLs (item 36) for implementation as part of the RtI process. Please review the section titled "Likert Measures: Interval Level Data and Repeated Measures Analysis" at the beginning of this chapter for additional information.

Table 25: *Repeated Measures Paired Items 33/34 and 35/36*

Paired Questions	Level 1	Level 2
Questions 33 & 34	Q 33 I believe that post-graduate training opportunities have prepared me to effectively participate in the RtI process for students *whose native language is English.*	Q 34 I believe that that post-graduate training opportunities have prepared me to effectively participate in the RtI process for *English language learners.*
Questions 35 & 36	Q 35 I believe that post-graduate training opportunities have provided a comprehensive review of interventions empirically validated on *native English speakers* for implementation as part of RtI.	Q 36 I believe that post-graduate training opportunities have provided a comprehensive review of interventions empirically validated on *English language learners* for implementation as part of RtI.

The means and standard deviations for responses to items 33/34 and 35/36 are presented in Table 26. A one-way repeated-measures ANOVA was conducted with the factor being the change in wording between items 33/34 and items 35/36 ("native English speakers" versus

"English language learners") and the dependent variable being the mean response for each item.

As explained in the narrative for research question four, the assumption of sphericity for both

comparisons has been met.

Table 26: *Items 33/34 and 35/36 Descriptive Statistics*

	Mean	Std. Deviation	N
Q 33 I believe that post-graduate training opportunities have prepared me to effectively participate in the RtI process for students *whose native language is English.*	3.73	1.091	146
Q 34 I believe that that post-graduate training opportunities have prepared me to effectively participate in the RtI process for *English language learners*.	3.11	1.121	146
Q 35 I believe that post-graduate training opportunities have provided a comprehensive review of interventions empirically validated on *native English speakers* for implementation as part of RtI.	3.34	1.189	146
Q 36 I believe that post-graduate training opportunities have provided a comprehensive review of interventions empirically validated on *English language learners* for implementation as part of RtI.	2.64	1.029	146

The results indicated a statistically significant difference in mean responses for both pairs

of items. For the comparison between items 33 and 34, results were as follows: $F(1, 145) =$

44.150, $p < .001$, Cohen's $d = 0.56$, partial $\eta^2 = .233$. The mean response on item 33, focused on

native English speakers, was statistically significantly higher than the mean response on item 34,

focused on ELLs.   These results suggest that participants' perceive that their post-graduate

training more effectively prepared them to participate in the RtI process with native English

speakers than with ELLs. The effect size for this analysis is in the medium range according to

Cohen (1988) and approaching the moderate range according to the partial η^2 (Ferguson, 2009).

These results confirm the hypothesis that mean responses on items regarding training

experiences specified for native English speakers would be higher than for those specified for ELLs.

For the comparison between items 35 and 36, results were as follows: $F(1, 145) = 59.817$, $p < .001$, Cohen's $d = 0.63$, partial $\eta^2 = .292$. The mean response on item 35, focused on native English speakers, was statistically significantly higher than the mean response on item 36, focused on ELLs. These results again suggest that participants perceive that their post-graduate training provided more comprehensive instruction on empirically-validated interventions for use with native English speakers within RtI than for ELLs. The effect size for this analysis is also in the medium/moderate range. These results further confirm the hypothesis that mean responses on items specified for native English speakers would be higher than for those specified for ELLs.

Research Question Seven

To what degree do respondents report being confident in the areas addressed on the questionnaire that relate to knowledge of, experience with, and implementation of interventions within an RtI framework (items 39-50)? Are any notable differences present between responses to paired items that specifically juxtapose perceptions related to training experiences on RtI with native English speakers versus ELLs (items 41/42, 43/44, 47/48, 49/50)?

Through research question seven and questionnaire items 39 through 50, the researcher explored participants' perceptions regarding the implementation of interventions as part of RtI. These questions inquired about participants' confidence in their knowledge of Tiers 1, 2, and 3 as related to both native English speakers and ELLs, about participants' confidence in their

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abilities to analyze the impact of second language learning and ESOL programming needs, and about participants' confidence in their abilities to analyze research and in their overall breadth of knowledge within the context of RtI as related to both native English speakers and ELLs. Items 39 and 40, 41 and 42, 43 and 44, 47 and 48, and 49 and 50 are paired items that compare native English speakers and ELLs.

As hypothesized, the frequencies of participants' responses across the items were variable (Table 27). When observing the frequencies for the paired items indicated above, it becomes evident that differences are noted in the response patterns. Across each of these paired items, a much greater percentage of participants responded "Strongly Agree" or "Agree" for those items related to native English speakers (items 39, 41, 43, 47, and 50) than for items related to English language learners (items 40, 42, 44, 48, and 50). For example, on paired items 41 and 42, 55.8% of participants responded "Strongly Agree" or "Agree" when asked about their confidence in their knowledge related to empirically validated interventions for native English speakers at Tier 2, as compared to only 23.4% who responded "Strongly Agree" or "Agree" when asked the same question with respect to ELLs. The reader is encouraged to reference the frequencies for the additional paired items, as documented in Table 27. A more specific analysis of these paired items is provided in a subsequent portion of this section.

Items 45 and 46 inquire about participants' confidence in their abilities to analyze the impact of second language learning and ESOL programming as related to ELLs within the framework of RtI. Slightly more than 38% of participants responded "Strongly Agree" or "Agree" on item 45, and 32.4% responded "Strongly Agree" or "Agree" on item 46. Percentages

of participants' responses are distributed similarly across the five possible responses, indicating a

similar level of confidence for these two related items.

Table 27: *Questionnaire Items 39-50: Perceptions of Knowledge of Empirical Interventions &*

Research Analysis

Item	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
39. I am confident in my knowledge of the core curriculum used at my work location(s) as part of Tier 1 of RtI.	24.8%	44.8%	17.2%	10.3%	2.8%
40. I am confident in my knowledge of how the core curriculum used at my work location(s) as part of Tier 1 *specifically* addresses the needs of *English language learners*.	6.2%	23.4%	24.1%	29.3%	6.9%
41. I am confident in my knowledge of empirically validated interventions *for native English speakers* used at my work location(s) as part of Tier 2 of RtI.	23.4%	32.4%	20.0%	22.1%	2.1%
42. I am confident in my knowledge of interventions *specifically* designed (empirically validated) for use with *English language learners* at my work location as part of Tier 2 of RtI.	5.5%	17.9%	24.8%	43.4%	8.3%
43. I am confident in my knowledge of interventions *for native English speakers* used at my work location(s) as part of Tier 3 of RtI.	23.4%	29.7%	24.8%	20.0%	2.1%
44. I am confident in my knowledge of interventions *specifically* designed (empirically validated) for use with *English language learners* at my work location as part of Tier 3 of RtI.	2.8%	17.4%	20.8%	47.9%	11.1%
45. I am confident in my ability to analyze the impact of second language learning as it relates to intervention selection when RtI is implemented with English language learners.	5.6%	32.6%	26.4%	31.3%	4.2%
46. I am confident in my ability to analyze whether an English language learner's English for Speakers of Other Languages (ESOL) programming needs are appropriately matched with interventions within a framework of RtI.	3.4%	29.0%	25.5%	35.9%	6.2%
47. I am confident in my ability to analyze research to determine if an intervention has been empirically validated for use with *native English speakers* within RtI.	26.9%	43.4%	13.8%	13.8%	2.1%
48. I am confident in my ability to analyze research to determine if an intervention has been empirically validated for use *with English language learners* within RtI.	16.6%	44.8%	20.0%	13.1%	5.5%
49. I am confident in the breadth of my knowledge of interventions for *native English speakers* for use with RtI.	21.4%	37.9%	19.3%	18.6%	2.8%
50. I am confident in the breadth of my knowledge of interventions for *English language learners* for use with RtI.	3.4%	18.6%	29.7%	38.6%	9.7%

Research question seven also sought to determine if statistically significant differences in mean responses were noted between paired items with content that juxtaposed native English speakers and ELLs (items 41/42, 43/44, 47/48, 49/50; Table 28). Items 41 and 42 inquired about participants' perceptions of confidence in their knowledge of empirically-validated interventions used as part of Tier 2 of RtI with native English speakers (item 41) and English language learners (item 42). Items 43 and 44 focused on participants' perceptions of confidence in their knowledge of empirically-validated interventions used as part of Tier 3 of RtI with native English speakers (item 43) and ELLs (item 44). Items 47 and 48 inquired about participants' perceived confidence in their ability to analyze research to determine if an intervention had been empirically-validated for use with native English speakers (item 47) and ELLs (item 48). Lastly, items 49 and 50 focused on participants' perceptions of confidence regarding the breadth of their knowledge of interventions for use with RtI for native English speakers (item 49) and ELLs (item 50). Reference the section titled "Likert Measures: Interval Level Data and Repeated Measures Analysis" at the beginning of this chapter for additional information.

Table 28: *Repeated Measures Paired Items 41/42, 43/44, 47/48, and 49/50*

Paired Questions	Level 1	Level 2
Questions 41 & 42	Q 41 I am confident in my knowledge of empirically validated interventions *for native English speakers* used at my work location(s) as part of Tier 2 of RtI.	Q 42 I am confident in my knowledge of interventions *specifically* designed (empirically validated) for use with *English language learners* at my work location as part of Tier 2 of RtI.
Questions 43 & 44	Q 43 I am confident in my knowledge of interventions *for native English speakers* used at my work location(s) as part of Tier 3 of RtI.	Q 44 I am confident in my knowledge of interventions *specifically* designed (empirically validated) for use with *English language learners* at my work location as part of Tier 3 of RtI.
Questions 47 & 48	Q 47 I am confident in my ability to analyze research to determine if an intervention has been empirically validated for use with *native English speakers* within RtI.	Q 48 I am confident in my ability to analyze research to determine if an intervention has been empirically validated for use *with English language learners* within RtI.
Questions 49 & 50	Q 49 I am confident in the breadth of my knowledge of interventions for *native English speakers* for use with RtI.	Q 50 I am confident in the breadth of my knowledge of interventions for *English language learners* for use with RtI.

The means and standard deviations for responses to items 41/42, 43/44, 47/48, and 49/50 are presented in Table 29. A one-way within-subjects ANOVA was conducted with the factor being the change in wording between items 41/42, 43/44, 47/48, and 49/50 ("native English speakers" versus "English language learners") and the dependent variable being the mean response for each item. As explained in the narrative for research question four and six, the assumption of sphericity for all comparisons has been met.

Table 29: *Items 41/42, 43/44, 47/48, and 49/50 Descriptive Statistics*

	Mean	Std. Deviation	N
Q 41 I am confident in my knowledge of empirically validated interventions *for native English speakers* used at my work location(s) as part of Tier 2 of RtI.	3.53	1.137	145
Q 42 I am confident in my knowledge of interventions *specifically designed (empirically validated) for use with English language learners* at my work location as part of Tier 2 of RtI.	2.69	1.038	145
Q 43 I am confident in my knowledge of interventions *for native English speakers* used at my work location(s) as part of Tier 3 of RtI.	3.53	1.122	144
Q 44 I am confident in my knowledge of interventions *specifically designed (empirically validated) for use with English language learners* at my work location as part of Tier 3 of RtI.	2.53	.996	144
Q 47 I am confident in my ability to analyze research to determine if an intervention has been empirically validated for use with *native English speakers* within RtI.	3.79	1.053	145
Q 48 I am confident in my ability to analyze research to determine if an intervention has been empirically validated for use *with English language learners* within RtI.	3.54	1.087	145
Q 49 I am confident in the breadth of my knowledge of interventions for *native English speakers* for use with RtI.	3.57	1.104	145
Q 50 I am confident in the breadth of my knowledge of interventions for *English language learners* for use with RtI.	2.68	.999	145

The results indicated a statistically significant difference in mean responses for all item pairs. For the comparison between items 41 and 42, results were as follows: $F(1, 144) = 80.617$, $p < .001$, Cohen's d = 0.77, partial $\eta^2 = .359$. The mean response on item 41, focused on native English speakers, was statistically significantly higher than the mean response on item 42, focused on ELLs. These results suggest that participants perceived themselves as more confident in their knowledge of empirically validated interventions at Tier 2 for native English speakers than for ELLs. The effect size for this analysis is approaching the large range according to Cohen's d and is in the moderate range according to the partial η^2. These results

confirm the hypothesis that mean responses on items regarding interventions at Tier 2 specified for native English speakers would be higher than for those specified for ELLs.

For the comparison between items 43 and 44, results were as follows: $F(1, 143) = 104.00$, $p < .001$, Cohen's $d = 0.94$, partial $\eta^2 = .421$. The mean response on item 43, focused on native English speakers, was statistically significantly higher than the mean response on item 36, focused on ELLs. These results suggest that participants perceived themselves as more confident in their knowledge of empirically validated interventions at Tier 3 for native English speakers than for ELLs. The effect size for this analysis is in the large range according to Cohen's d and in the moderate range according to the partial η^2. These results once again confirm the hypothesis that mean responses on items related to participants' knowledge of empirically validated interventions at Tier 3 for native English speakers would be higher than for those related to ELLs.

For the comparison between items 47 and 48, results were as follows: $F(1, 144) = 13.936$, $p < .001$, Cohen's $d = 0.23$, partial $\eta^2 = .088$. The mean response on item 47, focused on native English speakers, was statistically significantly higher than the mean response on item 48, focused on ELLs. These results suggest that participants perceived themselves as more confident in their ability to analyze research to determine if an intervention has been empirically validated for native English speakers than for ELLs. The effect size for this analysis is in the small range according to both Cohen's d and the partial η^2. These results, too, confirm the hypothesis that mean responses on items specified for native English speakers would be higher than for those specified for ELLs.

For the comparison between items 49 and 50, results were as follows: $F(1, 144) = 83.367$, $p < .001$, Cohen's $d = 0.85$, partial $\eta^2 = .367$. The mean response on item 49, focused on native English speakers, was statistically significantly higher than the mean response on item 50, focused on ELLs. These results suggest that participants perceived themselves as more confident in the breadth of their knowledge of interventions for native English speakers than for ELLs. The effect size for this analysis is in the large range according to Cohen's d and in the moderate range according to the partial η^2. These results also support the hypothesis that mean responses on items specified for native English speakers would be higher than for those specified for ELLs.

Research Question Eight

What themes, ideas, and patterns are noted in participants' free responses to two items asking them to provide examples of academic interventions for use with native English speakers and with ELLs (items 51 and 52)?

Items 51 and 52 of the questionnaire asked participants to provide three examples of academic interventions (reading and/or math) for use with native English speakers (item 51) and with ELLs (item 52) that the RtI team their school(s) had recommended or with which they were familiar. The purpose of these items was to obtain a better understanding of participants' experiences with specific interventions within the context of RtI, with a specific emphasis on analyzing the pattern of responses for the two items. All responses were individually reviewed and transferred to an Excel spreadsheet for ease of analysis.

Responses were informally analyzed in light of the research reports and reviews provided by the What Works Clearinghouse (WWC) (n.d.). Established in 2002 by the Institute of Education Sciences at the U.S. Department of Education, the WWC seeks to provide a "central and trusted" source of scientific evidence about "what works" in education (What Works Clearinghouse, n.d.). The WWC undertakes scientific and systematic reviews of research to help educators distinguish from high-quality, empirically based research from weaker research and promotional claims (What Works Clearinghouse, n.d.). The WWC has reviewed a wide range of educational topics, including specific interventions for both mathematic and literacy and interventions for English language learners (What Works Clearinghouse, n.d.). The WWC does not recommend or endorse any specific programs; instead, it provides evidence on the effectiveness of specific interventions (What Works Clearinghouse, n.d.). The WWC notes that for many educational interventions, little or no research exists that meets the standards established by the WWC (What Works Clearinghouse, n.d.). It should be noted, however, that the absence of a specific intervention or study on the WWC website means that the intervention may not have been reviewed and/or one cannot draw conclusions about the efficacy or inefficacy of the intervention (What Works Clearinghouse, n.d.). The WWC provides one of five efficacy ratings that range from "positive" to "potentially negative" (What Works Clearinghouse, n.d.). The WWC can be searched for ratings for specific interventions (What Works Clearinghouse, n.d.).

Thirty four of the 148 participants left both items blank without any additional explanation. Nine participants provided responses for item 51 but left item 52 blank. Seven

participants provided responses for item 51 but wrote a question mark ("?") for item 52. Thus, out of 148 participants, 132 provided at least one example (of the three requested) for both items.

It is readily evident that participants produced an increased number of interventions for native English speakers (item 51). In many instances, three interventions were provided for item 51 but only one or two were provided for item 52. The majority of interventions listed for both items were related to the area of reading, and the vast majority of participants listed the same interventions for both items 51 and 52.

In light of the WWC reviews, it can be said that many of the interventions listed for native English speakers show potentially positive or positive effects, depending on the grade level and targeted skill(s). In contrast, it can be said that the majority of interventions listed on item 52 (English language learners) were not found on the WWC website or were found to have no discernible effect.

One highly salient pattern noted when analyzing items 51 and 52 reflected the presence of empirically based interventions versus instructional strategies or techniques, such as tutoring or pre-teaching vocabulary. A much greater number of participants listed such strategies/techniques for item 52 in comparison to item 51. It should also be noted that 13 participants listed "ESOL strategies" or "bilingual aide" as a scientifically-based intervention for ELLs to be used within the context of RtI, despite the fact that ESOL strategies and ESOL instruction as a whole are part of the standard Tier 1 for ELLs.

Another pattern that merits attention is related to what appears to be a misunderstanding of what constitutes a scientifically-based intervention. For both items 51 and 52, the following is a sampling of the items that shed light upon this misunderstanding: Dynamic Indicators of Basic

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Early Literacy Skills (DIBELS), tutoring, visuals, previewing vocabulary, pictures for context, manipulatives for counting, flashcards, repetition, one-on-one practice.

Some respondents provided additional comments on these items. These comments seem to indicate a general sense of limited knowledge and heightened discomfort in working with ELLs due to an absence of training. These comments also seem to emphasize a reliance on ESOL specialists to make intervention recommendations. Furthermore, it appears that several respondents were well aware that the use of the exact same interventions for both native English speakers and ELLs may not be effective.

Table 30*: Summary of Responses to Items 51 and 52*

Item 51 – Most Common Interventions Listed (Native English Speakers)	Item 51 – Most Common Interventions Listed (ELLs)	Sample "Non-Interventions" Listed	Relevant Quotes
Voyager Earobics Fast ForWord Successmaker Reading Mastery Read Well Corrective Reading Wilson	Voyager Earobics Fast ForWord Successmaker Reading Mastery Rosetta Stone	Pre-teach vocabulary ESOL instruction Tutoring Visual and supports Flash cards Paraphrase Practice	• "Teams do not differentiate strategies for ELLs." • "Not aware of any different from those used with native English speakers." • "Limited knowledge of evidence-based interventions for ELL students." • "ESOL specialists are overwhelmed." • "Cannot think of any interventions that were different for ELLs." • "Need more training on this – desperately." • "We send them for double time with our ELL team but I have no idea what they do." • "Use the same. It's not appropriate but it's used."

CHAPTER 5: DISCUSSION

The purpose of this study was to explore three key domains identified, through a thorough review of the literature, as key to the equitable implementation of Response to Intervention (RtI) with English language learners (ELLs): (1) degree of intercultural sensitivity of educators involved in implementing the RtI process, (2) training of these educators in areas directly related to RtI implementation specifically with ELLs, and (3) educator familiarity with empirically based interventions to be used as part of RtI with ELLs. RtI, founded upon the tenets of providing high-quality, empirically validated instruction and intervention, systematically assessing students' rates of growth, and using both formative and summative assessment to guide instructional decisions (Grimes, 2005), has become a primary tool within the field of education in recent years (NJCLD, 2005). Although RtI is purported to hold promise in addressing the needs of ELLs (Brown & Dolittle, 2008a; Klingner & Edwards, 2006; Orosco & Klingner, 2010), concerns persist regarding how best to implement RtI with this population. Unless RtI is implemented with specific consideration for the needs of ELLs, RtI may develop into a discriminatory system (Brown & Dolittle, 2008a).

Due to the critical role of school psychologists in the RtI implementation process (National Association of School Psychologists, 2006; Sullivan & Long, 2010), this investigation focused on examining these three key domains with a sample of school psychologists from the Florida Association of School Psychologists (FASP). Through the questionnaire developed as part of this investigation, data on the following were collected: (1) school psychologists' level of intercultural sensitivity; (2) school psychologists' experiences and perceptions related to both graduate and post-graduate level training in areas directly related to implementing RtI with

native English speakers and ELLs; and (3) school psychologists' perceptions of familiarity with empirically-based interventions for use within an RtI framework with native English speakers and ELLs. It was the intention of this researcher, through the design of the questionnaire, to juxtapose school psychologists' experiences and perceptions with respect to native English speakers versus ELLs. By contrasting school psychologists' experiences and perceptions between these two groups, it is possible to determine if differential levels of intercultural sensitivity, perceived preparedness, and reported training are documented with respect to implementing RtI with ELLs. Caution is warranted in moving forward with RtI in the absence of strategic research and training that address the three key variables identified as vital to implementing RtI equitably with ELLs.

The remainder of this discussion is structured to review the results of each of the eight research questions prior to presenting a comprehensive synthesis of the data and analyzing the results in light of the three domains delineated through the Literature Review as critical to the equitable implementation of RtI with ELLs. Subsequently, recommendations for practice will be delineated; the reader is reminded that the delimitations and limitations of this study were presented in the introductory chapter. Lastly, recommendations are made for future research.

Research Question One

What is the degree of intercultural sensitivity of school psychologists surveyed, as measured by the total score on the ISS? Are there differences in degree of intercultural sensitivity (total score) based upon demographic variables (gender, number of years as a school psychologist,

highest degree completed, reported status as Hispanic/Latino/Spanish, reported ethnic category, linguistic fluency, and primary place of employment)?

The overall degree of intercultural sensitivity of the school psychologists in the sample, based upon an observed mean of 100.18 on the 24-item ISS (minimum of 24, maximum of 120), is consistent with the results obtained by West (2009) in her investigation of the ISS with guidance counselors. This consistency supports the initial hypothesis. As indicted by Chen & Starosta (2000), higher scores on the ISS are indicative of higher levels of sensitivity in intercultural interactions. As the authors of the ISS do not provide an interpretive guide for total scores on the ISS, an overall classification for the mean score of the sample of school psychologists cannot be provided. However, comparisons were made among the scores based upon the different demographic variables addressed in this investigation.

Statistically significant differences in mean score were found for reported status as Hispanic/Latino/Spanish and linguistic fluency, consistent with the hypothesis. It should be noted that it was also posited that a statistically significant difference would be noted based upon participants' self-reported ethnicity; this hypothesis was not supported by the data. The mean score for those individuals who identified themselves as Hispanic/Latino/Spanish and/or as fluent in a second language was higher than for those individuals who not did identify themselves as such. Thus, these two demographic variables are associated with higher scores on the ISS, which, according to the authors, indicates higher levels of intercultural sensitivity. Although a thorough analysis for the basis of the elevated scores on the ISS for these two groups is beyond the scope of the current investigation, the higher scores for these groups may be partly

due to personal and professional experiences with as well as an understanding of diversity and/or bilingualism/multi-lingualism among those school psychologists in these two demographic groups. School psychologists in either of these two groups are likely to have had life experiences related to their own diversity that may influence how they, in turn, interact with other culturally and linguistically diverse individuals. These experiences, by their very personal nature, may be associated with increases in total score on the ISS.

Research Question Two

Do the data from the ISS as used in the current study confirm the five-factor structure identified by the authors of the ISS?

Through an analysis of the results of the principal components estimation procedures, including the scree plot and the factor loadings, it was evident that a one-factor solution best represented the data obtained from the administration of the ISS with the sample of school psychologists used as part of this investigation. Although these results do not confirm Chen & Starosta's (2000) five-factor structure and deviate from the hypothesized outcome, they do provide support for the use of the ISS with school psychologists as a measure of an individual factor titled "intercultural sensitivity." The ISS holds promise, based upon the current analysis, as a practical and convenient measure of intercultural sensitivity for school psychologists. Due to its short length, ease of scoring and interpretation, and the evidence indicating that the ISS is capable of measuring a singular factor, "intercultural sensitivity," the ISS is recommended by this researcher as a tool for use with school psychologists. The administration and interpretation

of the ISS with school psychologists and students of school psychology, through graduate and post-graduate training experiences, will help this population better understand their degree of intercultural sensitivity. This attribute is critical to the development and maintenance of culturally responsive educational practices, which are necessary for the equitable implementation of RtI.

Research Question Three

What proportion of school psychologists surveyed report having received graduate-level training in the areas addressed on the questionnaire [culture, cultural sensitivity, and cultural bias; RtI implementation; empirically-based interventions for use with RtI; second language learning; and English for Speakers of Other Languages (ESOL) programming] (items 1-9)? Are any notable differences present between responses to items that juxtapose training for implementation of RtI as a whole versus RtI with ELLs (items 4/5 and 6/7)?

Results indicated that while over 80% of school psychologists reported training that focused on the concept of culture and related attributes, a considerable decrease was noted in affirmative responses for items focused on RtI both with native English speakers and ELLs. This comparative decrease in affirmative responses may be reflective of recent legislative changes in exceptional student education eligibility mechanisms from the traditional discrepancy model to an increased focus on a child's responsiveness to interventions (Haager et al., 2007; Lembke, Garman, Deno, & Stecker, 2010). These legislative changes have significantly expanded the role of the school psychologist (Canter, 2006), and graduate training programs have, presumably,

increased their focus on RtI in an effort to prepare future practitioners. In comparison, based upon the number of affirmative responses with respect to the presence of graduate training in the area of culture and its related attributes, it seems that a focus on the concept of culture is more consistently reported in graduate training experiences. This difference is participants' responses between these two conceptual areas (culture/related attributes and RtI with both native English speakers and ELLs) may reflect longitudinal changes in the content of training programs.

A similar decrease in the presence of affirmative responses is also noted between items that address culture and the items that address training in second language learning and ESOL models. It is, again, possible that this discrepancy in the response pattern is rooted in changes in the content of graduate programs over time, with school psychologists trained more recently reporting an increased presence in training regarding second language learning and ESOL programming. A specific focus on identifying a relationship between participants' experience as a school psychologist (number of years of practice) and patterns of responding is beyond the focus of this investigation, but suggestions for future research will be provided in a subsequent section.

Within the block of items that directly address the presence of graduate level training in RtI, large differences were noted between those items that juxtapose training focused on the use of RtI with native English speakers versus English language learners. Confirming the initial hypothesis, these results are disconcerting due to participants' reports of comparatively less graduate training focused on implementing RtI specifically with English language learners. Unfortunately, limited knowledge and training specific to the topic of RtI with ELLs is purported

to possibly lead to greater disproportionality in exceptional student education (Brown & Doolittle, 2008a).

Research Question Four

What are school psychologists' perceptions about the impact of their graduate training on the areas addressed on the questionnaire (culture, cultural sensitivity, and cultural bias; RtI implementation; empirically-based interventions for use with RtI; second language learning; and ESOL programming) (items 10-19)? Are any notable differences present between responses to paired items that specifically juxtapose perceptions related to training experiences on RtI with native English speakers versus ELLs (items 14/15 and 16/17)?

Items associated with this research question were designed to obtain data regarding participants' perceptions of their graduate training. A response pattern was noted that is clearly related to the data collected through Research Question Three. The majority of participants reported that graduate training had had a considerable impact ("Strongly Agree" or "Agree") on items associated with culture. In contrast, the majority of participants reported a lesser impact ("Neither Agree Nor Disagree," "Disagree," or "Strongly Disagree") on items related to second language learning and ESOL programming. Thus, it is evident that school psychologists report not only a greater presence of training in areas related to culture (Research Question Three) but also a greater impact of training related to culture (Research Question Four) in comparison to training related to second language learning and ESOL. Again, this may be evidence of a longitudinal effect that is beyond the scope of the current study.

Results of the one-way repeated measures ANOVA conducted on the paired items with context that juxtaposed native English speakers and ELLs identified statistically significant differences in mean responses for both paired items. These results suggest that participants perceived that their graduate training provided more comprehensive instruction regarding RtI and interventions for use within RtI with native English speakers than with ELLs. These results are consistent with respondents' reports of a greater presence of training for implementing RtI with native English speakers than with ELLs (Research Question Three) and with the stated hypothesis.

These results are, again, troubling, given the evidence suggesting that the validity of utilizing RtI with ELLs has been a topic of concern since the inception of the model (Linan-Thompson & Ortiz, 2009). These statistically significant results support concern regarding the training of educators (including school psychologists) in implementing RtI with ELLs (Brown & Doolittle, 2008a).

Research Question Five

What proportion of school psychologists surveyed report having received post-graduate training in the areas addressed on the questionnaire (culture, cultural sensitivity, and cultural bias; RtI implementation; empirically-based interventions for use with RtI; second language learning; and ESOL programming) (items 20-28)? Are any notable differences present between responses to items that juxtapose training for implementation of RtI as a whole versus RtI with ELLs (items 23/24 and 25/26)?

Results indicated that the majority of participants reported having attended training on culture and related attributes within the past two years, while fewer reported training focused on second language learning and ESOL models, a pattern similar to that found for these same items with respect to graduate level training. Nearly all participants (95%) reported attending training on RtI as a whole within the last two years. This notable percentage is likely attributable to the recent legislative changes regarding RtI. As these changes directly influence the practice of school psychology (Canter, 2006), it is expected that post-graduate training in RtI would be necessary to ensure the development of school psychologists' knowledge and skills in this new arena of practice. It is laudable that school psychologists are receiving post-graduate training regarding RtI as a whole in such large numbers. Unfortunately, however, only 42% of participants reported having had post-graduate training in the implementation of RtI specifically relative to meeting the needs of ELLs within this framework. These dichotomous results are critical to consider, given the urgency of training educators so that RtI may be equitably implemented with ELLs.

Also of concern, as hypothesized, a large difference was noted between the numbers of respondents reporting training at the post-graduate level focused on empirically validated interventions for use with native English speakers versus ELLs. Again, given the underlying tenets of RtI necessitating the use of interventions validated upon those populations with whom they are used (Klingner & Edwards, 2006), these results reinforce the caution recommended by researchers regarding the valid use of RtI with ELLs (e.g., Brown & Doolittle, 2008a; Haagar, 2007; Linan-Thompson & Ortiz, 2009; Xu & Drame, 2007).

Research Question Six

What are school psychologists' perceptions about the impact of their post-graduate training experiences on the areas addressed on the questionnaire (culture, cultural sensitivity, and cultural bias; RtI implementation; empirically-based interventions for use with RtI; second language learning; and ESOL programming) (items 29-38)? Are any notable differences present between responses to paired items that specifically juxtapose perceptions related to training experiences on RtI with native English speakers versus ELLs (items 33/34 and 35/36)?

Items associated with this research question were designed to obtain data on participants' perceptions of their post-graduate training. As with the results of Research Question Four, the majority of participants reported that post-graduate training experiences have had a considerable impact (Strongly Agree" or "Agree) on items related to culture, while less influence was noted for post-graduate training in second language learning and ESOL ("Neither Agree Nor Disagree," "Disagree," or "Strongly Disagree").

Results of the one-way repeated measures ANOVA conducted on the paired items with context that juxtaposed native English speakers and ELLs confirmed the researcher's hypothesis and identified statistically significant differences in mean responses for both paired items. These results are again indicative of participants' perceptions that post-graduate training has provided more comprehensive instruction regarding RtI and interventions with native English speakers than with ELLs. These results concur with respondents' reports of a greater presence of post-graduate training for implementing RtI with native English speakers than with ELLs (Research Question Five) as well as with the researcher's hypothesis. It is reassuring that participants'

responses clearly document consistent training regarding the implementation RtI with native English speakers within the general education setting, given that the vast majority of students (80%) who will receive RtI services are a general education setting (Tilly, 2008). However, it is again indicated that these results give rise to concern with respect to the wide-scale implementation of RtI with ELLs that is occurring across the nation. Training specified for ELLs is vital given the large increases in numbers of ELL students served through our schools.

Research Question Seven

To what degree do respondents report being confident in the areas addressed on the questionnaire that relate to knowledge of, experience with, and implementation of interventions within an RtI framework (items 39-50)? Are any notable differences present between responses to paired items that specifically juxtapose perceptions related to training experiences on RtI with native English speakers versus ELLs (items 41/42, 43/44, 47/48, 49/50)?

Items associated with Research Question Seven were designed to investigate participants' perceptions of confidence regarding the implementation of interventions as part of RtI with native English speakers versus ELLs. Specifically, these questions inquired about respondents' perceived confidence in their knowledge of interventions at Tiers 1, 2, and 3 for native English speakers versus ELLs, perceived confidence in their abilities to analyze the impact of second language learning and ESOL programming needs, and perceived confidence in their overall breadth of knowledge within the context of RtI for native English speakers versus ELLs.

Results identified statistically significant differences in mean responses for all paired items that juxtaposed participants' perceptions of their confidence with respect to native English speakers versus ELLs. Additionally, on items that inquired about participants' confidence in their abilities to analyze the impact of second language learning and ESOL programming as related to ELLs within the context of RtI, less than 40% of responses were favorable ("Strongly Agree" or "Agree"). These results are consistent with the hypothesis, and provide further indication that among the sample of school psychologists that were part of this investigation, perceptions of confidence are different when considering the needs of native English speakers as opposed to ELLs. This finding adds further support to the contention that the equitable foundation required for implementing RtI with ELLs is currently not in place when considering the role of the school psychologist.

Research Question Eight

What themes, ideas, and patterns are noted in participants' free responses to two items asking them to provide examples of academic interventions for use with native English speakers and with ELLs (items 51 and 52)?

Items 51 and 52 in the questionnaire sought to obtain qualitative data regarding participants' familiarity with academic interventions for use with native English speakers and ELLs. Participants were asked to provide a total of six responses (three interventions for use with native English speakers and three for use with ELLs). Responses were individually reviewed and analyzed informally in conjunction with the research reports and reviews provided

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by the What Works Clearinghouse (WWC, n.d.). Overall patterns in responding were readily apparent: (1) Participants provided a greater number of interventions for native English speakers; (2) The majority of the interventions listed for native English speakers were referenced on the WWC and were reported to have potentially positive or positive effects; (3) The majority of individuals duplicated their responses to items 51 and 52, providing the same set of interventions for both native English speakers and ELLs; (4) The majority of interventions provided for use with ELLs were not found on the WWC or were found to have no discernible effect; (5) Participants were more likely to provide an instructional strategy/technique (e.g., visuals, pictures for context, manipulatives) for ELLs than for native English speakers, even though the question asked for empirically validated interventions; and (6) A certain degree of misunderstanding was evident regarding what *is* and what *is not* defined as a scientifically based intervention (e.g., Corrective Reading versus DIBELS). Additional comments provided by participants highlighted a general sense of unease in working with ELLs due to limited training and resources as well as a reliance on ESOL specialists to recommend and implement interventions with ELLs.

These qualitative data support the conclusions based upon quantitative data that participants report a differential level of training and perceived preparedness in the areas that have been identified as critical to the equitable implementation of RtI. The original responses provided to these questionnaire items, particularly the comments provided by some of the participants, are a unique and valuable addition to this investigation. The patterns of responding detected for these two items support the continued conclusion that school psychologists in the

sample appear more adequately prepared to implement RtI with native English speakers than with ELLs.

Research Synthesis

Foundation for the Study

RtI has rapidly become one of the most salient initiatives within the U.S. educational system, and research indicates that it has vast implications for improving the educational experiences of U.S. students. Dissatisfaction with the traditional ability-achievement discrepancy model, inappropriate referrals to and placement in special education, and recent research highlighting the benefit of early identification and sustained prevention in the area of reading have precipitated the rapid development of the RtI model (NJCLD, 2005). The passage of IDEIA (2004), which legitimizes the use of RtI as an alternative eligibility mechanism for special education, further encouraged the widespread implementation of RtI. Due to its emphasis on early intervention through a multi-tiered approach (e.g., Brown & Dolittle, 2008a; Bursuck & Blanks, 2010), including the use of school-wide screening, empirically-validated interventions, and frequent progress monitoring (Brown & Dolittle, 2008a), RtI is purported to foster stronger student performance in general education and reduce inappropriate placements within special education (Fuchs & Young, 2006).

Despite its widespread use, several cautions exist with respect to the implementation of RtI, particularly when used as an eligibility mechanism for exceptional student education services, as allowed by IDEIA (2004) (Sugai & Horner, 2009). These concerns include the

absence of a consistent, operationalized definition of "nonresponsiveness" (Fuchs & Fuchs, 2006a); a lack of standardized assessments and measurement procedures associated with RtI (Fuchs & Fuchs, 2006a; Sugai & Horner, 2009); limited information regarding the efficiency, effectiveness, and relevance of interventions as well as the fidelity of implementation (Sugai & Horner, 2009); and, perhaps most relevant to the current investigation, an absence of data on the applicability of RtI with culturally and linguistically diverse populations (Sugai & Horner, 2009).

Although the population of English language learners has skyrocketed in the U.S. in recent years, with an estimated 40% of the school population projected to be ELLs by 2030 (Orosco & Klingner, 2010), this population suffers from the highest dropout rate, lowest achievement scores, largest mobility rate, and highest rate of poverty (Xu & Drame, 2007). Proponents of RtI indicate that it has the potential to facilitate considerable academic benefits for this population given RtI's emphasis on the use of empirically-validated interventions (Brown & Dolittle, 2008a; Klingner & Edwards, 2006). However, the validity of using RtI with ELLs has been a question of concern among both supporters and detractors of the model (Linan-Thompson & Ortiz, 2009). Unfortunately, a repertoire of empirically-validated interventions for use with this population is notably absent (Haager, 2007), and a clear direction for how this model should best be conceptualized and implemented with ELLs remains a crucial topic for investigation (Xu & Drame, 2007).

The underlying assumptions of RtI require the use of empirically-validated interventions within the general education setting, implemented with a high degree of fidelity, such that all students are provided with an equal opportunity to learn (Brown & Dolittle, 2008a). To comply

with these tenets of RtI when implementing it with ELLs, it becomes necessary to ensure that ELLs are engaged through culturally responsive educational systems populated with culturally sensitive practitioners, that all practices are validated with students of cultural and linguistic backgrounds similar to those with whom they will be utilized, and that specialized criteria (such as defining a failure to respond and investigating the accuracy of the assessment process) are consistently considered (Brown & Doolittle, 2008a).

To ensure that RtI does not perpetuate a discriminatory educational system (Brown & Doolittle, 2008a), Tier 1, Tier 2, and Tier 3 of the RtI model must be designed with specific consideration of those attributes that make implementing RtI with ELLs different from doing so with native English speakers. All three tiers are predicated upon the use of evidence-based instructional practices validated upon linguistically diverse populations (Klingner & Edwards 2006), and instruction and intervention must always consider the ESOL needs of a student as well as the trajectory of second language acquisition (University of the State of New York & New York State Education Department, 2010). The academic needs and performances of ELLs must be examined in light of other ELLs, "true peers," with similar linguistic profiles and cultural experiences (Brown & Doolittle, 2008a). Additionally, the instructional approaches and interventions used across the tiers *must* be validated for use with ELLs (Klingner & Edwards, 2006). This requirement for the use of validated interventions cannot be understated, and is the crux of concerns regarding the use of RtI with ELLs. In the absence of empirically-validated interventions for use with this population, implementation of RtI with ELLs using un-validated instruction and intervention violates the most fundamental tenet of RtI calling for the use of empirically-validated instruction and intervention. In light of the research that has served as the

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foundation for this investigation, each of the three areas identified as critical to the equitable implementation of RtI with ELLs and investigated with a sample of school psychologists as part of this study, will now be individually discussed.

Intercultural Sensitivity

In an increasingly inter-connected world, intercultural sensitivity plays a critical role in helping individuals live successfully in a diverse environment. Interculturally sensitive individuals are necessary for the establishment of culturally responsive educational practices, which are a requirement for the equitable implementation of RtI with ELLs (Harris-Murri et al., 2006). Results of the ISS documented statistically significantly higher scores for participants in the sample who identified themselves as Hispanic/Latino/Spanish and/or as fluent in more than one language. These elevations in score may be reflective of experiential differences among these two groups that precipitate higher levels of intercultural sensitivity (as measured on the ISS), as discussed previously in this chapter. (See section Research Question One, p. 130.) Further investigation is needed to better understand how these attributes may be related to increased intercultural sensitivity and how experiences can be crafted for practitioners that can facilitate the development of increased intercultural sensitivity. It should be noted that the results of this study in no way indicate that participants with lower scores on the ISS are "culturally insensitive." It is unknown whether a particular level or cut-off score on the ISS would result in negative implications for service delivery to ELLs.

Additionally, the constructs of culture, cultural sensitivity, and cultural bias were addressed through questionnaire items that focused on participants' reports of training in these

areas both at the graduate and post-graduate level and on their perceptions of the impact of this training. When considered together, the data collected through these questions are indicative of a consistent presence of training in these areas at both the graduate and post-graduate level and a belief that this training has had a considerable impact on participants' knowledge. These overall outcomes are encouraging, given the importance of understanding the role of culture in mediating the experiences of ELLs within the educational setting (Harris-Murri et al., 2006), of being able to critically examine the influence of individual world views as it pertains to linguistically diverse students, and of moving beyond a cultural deficit view when working with ELLs (Van Hook, 2000).

It appears that this first of three critical components needed for equitable implementation of RtI is reportedly present in the training experiences of school psychologists and is reported to have had a positive impact on the knowledge and experiences of participants. Work remains, however, in determining why statistically significant differences in mean score on the ISS were noted for particular demographic groups and how training programs can craft valuable learning experiences to increase the intercultural sensitivity of practitioners.

Training of Educators

The second key area identified as critical to the equitable implementation of RtI is the training of educators, including school psychologists, in areas directly related to RtI implementation specifically with ELLs. By juxtaposing questions related to both the presence of training and the perceptions of this training with respect to RtI with native English speakers versus ELLs, the survey instrument designed for this investigation has highlighted substantial

discrepancies (and, for appropriate analyses, statistically significant differences) in participants' experiences and perceptions.

Broadly speaking, it can be said that among the participants, training for the implementation of RtI with native English speakers is present in much greater levels than for implementation with ELLs. In fact, not only is training more salient for the native English speaking population, but school psychologists' perceptions about the impact of this training are more favorable than for training focused on ELLs. For the sample of school psychologists in this investigation, a disparity exists with respect to training that strategically and specifically delineates how to effectively participate in the RtI process for ELLs, including how to understand the role of second language learning and ESOL programming needs.

Preparation of those individuals who will be directly involved in the RtI process for ELLs is essential to the success of RtI models with this population (Xu & Drame, 2007). Educators, including school psychologists, must be directly trained on the variables that distinguish "RtI for native English speakers" from "RtI for ELLs," such as the need to consider the role of culture and language (Klingner & Edwards, 2006), the match between the curriculum and ELLs' linguistic proficiency (Brown & Doolittle, 2008a), and the comparison to "true peers" (Brown & Doolittle, 2008a). A student's status as an ELL is a critical characteristic that must never be interpreted as outside the scope of relevancy simply because it is an attribute or variable that cannot be "controlled" within the context of RtI. The results of this study support prior research stating that the implementation of RtI requires an approach that deviates from "business as usual" (Ten Regional Title IV Equity Assistance Centers, 2008). A paucity of training for school psychologists in implementing RtI with ELLs supports the claims of Brown & Doolittle (2008a)

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that many of the teams involved in the implementation of RtI with ELLs lack knowledge and training in key areas. The data collected from the school psychologists in this study regarding their training and perceptions of this training serve as a reminder to trainers, both at the graduate and post-graduate (district, state, professional organizations) levels that targeted training in implementing RtI with ELLs remains an area of critical need.

Familiarity with Empirically-Based Interventions

The third domain indicated as essential to appropriately implementing RtI with ELLs is the use of empirically-validated interventions. Instructional practices and interventions at each tier of RtI must be developed from empirical evidence collected through a rigorous research practice that determines what "works with whom, by whom, and in what contexts" (Klingner & Edwards, 2006, p. 108). The literature on RtI with ELLs is uniform in its message that this requirement of empirically-based interventions is a fundamental limitation within current implementation efforts; this most basic criterion is, unfortunately, often not met due to the scarcity of research with ELLs (Klingner & Edwards, 2006).

In an attempt to explore this domain, questionnaire items were designed to measure school psychologists' perceived confidence in implementing Tier 1, Tier 2, and Tier 3 of RtI with native English speakers versus ELLs; in analyzing the impact of second language learning and ESOL programming needs when implementing RtI ; in analyzing their ability to determine the empirical validity of interventions for native English speakers versus ELLs; and in their overall confidence in the breadth of knowledge of interventions for these two populations. Questions were again designed to juxtapose native English speakers and ELLs.

Results once more confirm that a disparity exists in respondents' perceptions of their own knowledge with respect to RtI with native English speakers as opposed to ELLs. The statistically significant differences in mean responses for the juxtaposed items lend further credence to the concern that a differential basis of preparation for and understanding of RtI exists when comparing its implementation with these distinct groups of students. In the absence of an equitable knowledge base, it is unknown if the school psychologists in the sample are able to participate in the RtI process in a manner that ensures that all students are provided with an adequate and appropriate opportunity to learn.

Results of the open-ended questions inquiring about school psychologists' familiarity with empirically-based interventions for use with native English speakers and ELLs reveal respondents provided a greater number (quantity) of appropriate (empirically-validated) interventions for use with native English speakers. This yields concern when considering Orosco's (2010) claim that RtI is often implemented in a "one-size-fits-all" approach that is insufficient to truly meet the needs of ELLs.

Summary

Despite unequivocal evidence in the literature that the implementation of RtI with ELLs requires careful consideration of unique variables and a design that strategically addresses the needs of this unique population (e.g., Ten Regional Title IV Equity Assistance Centers, 2008; Linan-Thompson et al. 2007; Brown & Doolittle, 2008a; Harris-Murri et al., 2006), the results of this research suggest the presence of considerable delays in school psychologists' training and perceptions of preparedness to implement RtI with a linguistically diverse population as

compared to native English speakers in the three primary domains identified as critical to implementing RtI in an equitable manner: (1) degree of intercultural sensitivity of educators involved in implementing the RtI process, (2) training of these educators in areas directly related to RtI implementation specifically with ELLs, and (3) educator familiarity with empirically based interventions to be used as part of RtI with ELLs. Of particular concern are domains two and three, given the statistically significant differences in perceived preparedness documented through the course of this investigation. With respect to the domain of intercultural sensitivity, the statistically significant discrepancies noted in scores based upon the demographic characteristics of the participants identify the need for additional exploration of this construct.

Implementation of RtI in the absence of an equitable foundation, one that is solidified through the development of and focus on the three domains delineated above, risks violating the theoretical underpinnings of RtI which require the assurance that all students be given an appropriate opportunity to learn. In light of the results of this study, it is impossible to assert that, based upon the experiences and perceptions of this sample of school psychologists, an equitable foundation is present for ELLs. These results are compelling and support a call to all school psychologists and their trainers to embark on the journey needed to bring about equity in RtI implementation for all students, including ELLs. The literature suggests that RtI does, indeed, have the potential to radically alter and benefit the educational experiences of ELLs. These benefits, however, will only be seen when a model of RtI is developed that is tailored to the needs of ELLs, is implemented by culturally sensitive practitioners, and is bolstered by a broad base of interventions empirically validated with linguistically diverse populations.

Recommendations for Practice

Taken holistically, the results of this study highlight an area of critical need with respect to the training of school psychologists, both in graduate programs and through post-graduate training opportunities offered through districts and professional organizations. The data collected in this investigation indicate that school psychologists may not be equally prepared to equitably implement RtI with ELLs when compared to native English speakers. In the next section recommendations for practice will be offered.

Intercultural Sensitivity

Although the mean score of the ISS with the school psychologists in this study is on par with that of guidance counselors, as measured by West (2009), an interpretive framework is absent in situating the mean score obtained in this investigation along a continuum of intercultural sensitivity. Nonetheless, the ISS appears to be a useful tool in measuring this construct with school psychologists. The ISS can serve as a tool for self-assessment or as a pre- and post-test measure to gauge changes in intercultural sensitivity as a result of graduate coursework, post-graduate training, or other learning experiences (e.g., in-country immersion programs for school psychologists).

Training of Educators

The National Association of School Psychologists (NASP) Standards for Graduate Training of School Psychologists serve as a blueprint for NASP-approved training programs

across the nation (NASP, 2010). These standards help to provide a unified set of principles that guide the graduate training of school psychologists and identify critical graduate training competencies and experiences (NASP, 2010). Training standard "2.8 Diversity in Development and Learning" focuses specifically on the role of diversity and on the importance of providing culturally competent and effective practices across all areas of the school psychology service delivery model. Trainers in the discipline of school psychology must continually promote the establishment of a unique skill set related to diversity and applicable to any and all professional experiences and interactions. Through the development and use of this skill set, school psychologists will be able to equitably reframe the concepts of RtI to meet the unique needs and considerations of individual ELLs. The results of this research do not imply that an equal amount or degree of training is needed on implementing RtI with ELLs in comparison to native English speakers. Rather, the results highlight an area of needed training that can and should be addressed through a specific emphasis on the unique components of RtI with ELLs and on those aspects of a skill set that promote culturally competent practice across all areas of the profession.

Familiarity with Empirically-Based Interventions

School psychologists must be aware of the necessity that interventions, within the context of RtI, be used only with those populations with whom they have been empirically investigated. RtI, at its very core, is predicated upon the use of empirically validated interventions. To ensure that this tenet of RtI is readily met, school psychologists and their trainers must become proficient in their knowledge of existing interventions that have been validated with ELLs as well as vocal in their concern regarding the use of interventions that have not been validated on

this population, particularly when high-stakes eligibility decisions are on the line. It is the role of the school psychologist to advocate for the best interest of the children with whom they work. By becoming knowledgeable regarding interventions designed for ELLs and by initiating a dialogue about the implications of eligibility decisions based on the use of un-validated interventions, school psychologists can help to defend the educational rights of ELLs.

Researchers in the field of school psychology should also heed the call to initiate investigations to determine the validity of interventions with ELLs. Only by augmenting the instructional and intervention base for this population will ELLs be able to experience the true benefits of the RtI model.

School Psychologists as Change Agents

School psychologists are currently at the forefront of systems-level change across a variety of educationally-relevant domains, including RtI (Shriberg, 2007). They can and do readily assume transformative roles in an effort to implement procedures and mindsets that work to enhance the academic potential of all students (Shriberg, 2007). School psychologists are tasked with providing leadership to ensure quality services for children and to create instructional environments that reduce alienation and promote respect and dignity for all students (Ysseldyke, Burns, Dawson, Kelly, Morrison, Ortiz, et al., 2006). As such, school psychologists are poised to function effectively as critical change agents and trainers regarding the unique nature of RtI implementation with ELLs. School psychologists may be able to use the results of this investigation to begin a dialogue with others regarding how to effectively and efficiently precipitate the changes needed to produce iterations of RtI that are equitable for ELLs.

Recommendations for Future Research

The following are provided as recommendations for potential future research from the existing data set as well as new and distinct lines of inquiry:

1. Replicate the current study with an expanded sample of school psychologists from the National Association of School Psychologists (NASP). This would assist in obtaining data from school psychologists across the United States to determine whether their experiences and perceptions align or differ.

2. Replicate the current study with a new sample of school psychologists from the state of Florida and gather demographic information regarding county of employment. This would assist in investigating any patterns of responses based upon this variable, highlighting any specific strengths and/or needs.

3. Conduct further analyses on the ISS with the current data set. Specifically, it would be of great interest to delve more deeply into the results of the factor analysis to analyze and name the minor factors for this population.

4. Conduct additional research on the ISS with an expanded sample of school psychologists for the purpose of determining if the ISS could be used as a pre- and post-test measure to gauge the effectiveness of a training program focused on the development of intercultural sensitivity for this population.

5. Conduct further research on the ISS in conjunction with previously validated measures of intercultural sensitivity designed for use with others in the mental health profession (e.g., clinical psychologists, mental health counselors, etc.). As a measure of intercultural sensitivity designed specifically for school psychologists was not

available, it would seem most appropriate to compare the ISS with a measure intended for use with a related population.

6. Conduct further research on the ISS to determine if a specified cut-off score can be identified that may correlate with negative student outcomes.

7. Conduct further analyses of the current data set to determine if a linear effect exists between participants' responses and number of years of experience as a school psychologist. This would assist in determining whether response patterns may be associated with changes in the field over time.

8. Conduct further analysis with items 51 and 52, which requested participants to provide examples of empirically-validated interventions for use with native English speakers and ELLs. The intent of this additional analysis would be to categorize each intervention listed as "empirically validated" or "not empirically validated," and to generate additional conclusions based upon this further analysis.

9. Redesign and pilot test a new version of the questionnaire that allows for the calculation of a total score for the entire questionnaire. The design of the questionnaire would be such that the higher the total score, the better prepared a respondent could be determined to be with respect to implementing RtI with ELLs.

10. Conduct additional research with a new sample of school psychologists to obtain qualitative data, to be analyzed through the constructs of grounded theory, to better understand school psychologists' perceptions and experiences in implementing RtI with ELLs.

APPENDIX A: PRE-NOTICE LETTER

Olivia E. Puyana, Ed.S., NCSP
School Psychologist & University of Central Florida Doctoral Candidate
1024 Grier Avenue, Orlando, FL 32804
321.299.2636
oliviapuyana@knights.ucf.edu

Date

Name
Address
Address

Dear Name,

Greetings! As a fellow school psychologist and a doctoral candidate at the University of Central Florida, I am writing to ask for your help with an important study aimed at understanding the experiences of school psychologists in Florida in implementing Response to Intervention (RtI) with native English speakers and with English language learners (ELLs). In the next few days, you will receive a request to participate in this project by answering a series of questions about your graduate and post-graduate training experiences, your experiences with RtI (both with native English speakers and ELLs), and your experiences with individuals from backgrounds different from your own.

I would like to do everything I can to make it easy and enjoyable for you to participate in this study. I am writing in advance because many people like to know ahead of time that they will be asked to fill out a questionnaire. This research can only be successful with the generous help of people like you.

To say thank you, you will receive a small token of appreciation with the request to participate. I hope you will take 15-20 minutes of your time to help. Most of all, I hope that you enjoy the questionnaire and the opportunity to voice your personal experiences. It is my intent that this research will help us all better meet the needs of all of our students.

Best Wishes,

Olivia E. Puyana, Ed.S., NCSP
School Psychologist & Principal Investigator

APPENDIX B: COVER LETTER/CONSENT

University of
**Central
Florida**

Olivia E. Puyana, Ed.S., NCSP
School Psychologist & University of Central Florida Doctoral Candidate
1024 Grier Avenue, Orlando, FL 32804
321.299.2636
oliviapuyana@knights.ucf.edu

Date

Name
Address
Address

Dear Name-

Greetings! As a fellow school psychologist and a doctoral candidate at the University of Central Florida, I am writing to ask for your help in understanding the experiences of school psychologists in the state of Florida in implementing Response to Intervention (RtI) with native English speakers and English language learners (ELLs) through a study titled "School Psychologist Perceptions Regarding Implementation of Response to Intervention with English Language Learners." The best way to document these experiences is by asking fellow school psychologists across the state to share their thoughts and opinions. Your name was obtained through the Florida Association of School Psychologists member directory and is one of only a small number of individuals that have been randomly selected to help in this study.

In the enclosed questionnaire, you will be asked a variety of questions about your graduate and post-graduate training experiences, your experiences with interventions, and your experiences working with individuals from different backgrounds. Taken holistically, results of this study will help in documenting our current experiences as school psychologists in implementing RtI with both native English speakers and ELLs. The over-arching goal of this research is quite simply to help our profession better meet the needs of all our students- a goal I know we each are highly committed to help achieve!

The questions should only take 15-20 minutes to complete. Your answers are anonymous and will be released only as summaries. Your answers will never be associated with your name or mailing address, as there is no identifying number of any kind on your questionnaire. However, to let me know that your questionnaire has been returned, please print your name on and return the enclosed postcard separately in the mail so that I may check your name off of the participant list. This way, no reminder questionnaire will be sent to you. Participation in this survey is completely voluntary. However, you can help us very much by taking a few minutes to share your experiences and opinions.

If you have any questions or concerns about this survey, please contact Olivia Puyana, the principal investigator, by phone at 321-299-2636 or by email at oliviapuyana@knights.ucf.edu. For your additional reference, Dr. Stephen Sivo, Associate Professor of Educational Research, Technology, & Leadership, is serving as the faculty advisor for this study. Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information regarding the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at 407-823-2901. If for some reason you prefer not to participate, please let us know by returning the blank questionnaire in the enclosed stamped envelope and printing your name on and returning the enclosed postcard separately in the mail so that so that we may check your name off of the participant list. This way, no additional correspondence will be mailed to you.

By taking a few minutes to share your experiences, you will be helping a great deal. A small token of appreciation has been enclosed as a way of saying thank you for your help.

I hope you enjoy completing the questionnaire and look forward to receiving your responses. If you are interested in the results of this study, please contact me directly by phone, email, or mail.

Many Thanks,

Olivia E. Puyana, Ed.S., NCSP
School Psychologist and Principal Investigator

P.S. Thank you again for your help!

APPENDIX C: ANONYMITY POSTCARD

Anonymity Postcard

Front

This postcard is being returned as part of the study "School Psychologist Perceptions Regarding Implementing Response to Intervention with English Language Learners."

Your Name:_____
(Please print.)

Thank you very much for your attention. It is very much appreciated!

Sincerely,

Olivia E. Puyana, Ed.S., NCSP
School Psychologist & Principal Investigator
oliviapuyana@knights.ucf.edu
321.299.2636

Back

Olivia E. Puyana
1024 Grier Avenue
Orlando, FL 32804

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APPENDIX D: THANK YOU POSTCARD

Thank You Postcard

Front

Date

Last week a questionnaire was mailed to you because you were randomly selected to help in a study about your experiences as a school psychologist in implementing Response to Intervention (RtI) with both native English speakers and English language learners.

If you have already completed and returned this questionnaire, please accept my sincere thanks. If not, please complete this survey today. Your responses are an integral part of this study, and I am very grateful for your help with this important research.

If you did not receive a questionnaire, or if it was misplaced, please call today to 321-299-2636, and another one will be placed in the mail for you today.

Thank you and best wishes,

Olivia E. Puyana, Ed.S., NCSP
School Psychologist & Principal Investigator
oliviapuyana@knights.ucf.edu
321.299.2636

Back

Olivia E. Puyana, Ed.S., NCSP
University of Central Florida Doctoral Student
1024 Grier Avenue
Orlando, FL 32804

Name
Address
Address

APPENDIX E: REPLACEMENT QUESTIONNAIRE LETTER

Olivia E. Puyana, Ed.S., NCSP
School Psychologist & University of Central Florida Doctoral Candidate
1024 Grier Avenue, Orlando, FL 32804
321.299.2636
oliviapuyana@knights.ucf.edu

Date

Name
Address
Address

Dear Name-

In mid-month, a letter was sent to your address asking you to complete a questionnaire about your experiences as a school psychologist in implementing Response to Intervention (RtI) with native English speakers and English language learners (ELLs) as part of a study titled "School Psychologist Perceptions Regarding Implementation of Response to Intervention with English Language Learners." To my best knowledge, it has not yet been returned.

I am writing again because of the importance of your questionnaire for helping us to get accurate results. It is only by hearing from nearly everyone in the sample that we can be sure that the results truly represent the experiences of school psychologists like you. Therefore, I hope that you will promptly fill out the replacement questionnaire included with this letter. We have received responses from your peers within the random sample, and we have obtained positive feedback in the form of personalized comments from many of those who have completed the questionnaire. Ultimately, your participation will enable us to better meet the needs of all of our students.

As mentioned previously, the questions should take 15-20 minutes to complete. Your participation is voluntary, and your responses are anonymous. Your name will never be associated with your answers or your address in any way, as there is no identifying number of any kind on your questionnaire. However, to let me know that your questionnaire has been returned, please print your name on and return the enclosed postcard separately in the mail so that I may check your name off of the participant list. This way, no reminder questionnaire will be sent to you.

If you have any questions or concerns about this survey of school psychologists, I may be contacted directly at 321-299-2636 or oliviapuyana@knights.ucf.edu. For your additional reference, Dr. Stephen Sivo, Associate Professor of Educational Research, Technology, & Leadership, is serving as the faculty advisor for this study. Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information regarding the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at 407-823-2901. If for some reason you prefer not to participate, please let us know by returning the blank questionnaire in the enclosed stamped envelope and printing your name on and returning the enclosed postcard separately in the mail so that so that we may check your name off of the participant list. This way, no additional correspondence will be mailed to you.

I hope that you enjoy the questionnaire.

Thank you,

Olivia E. Puyana, Ed.S., NCSP
School Psychologist and Principal Investigator

APPENDIX F: FINAL CONTACT

Olivia E. Puyana, Ed.S., NCSP
School Psychologist & University of Central Florida Doctoral Candidate
1024 Grier Avenue, Orlando, FL 32804
321.299.2636
oliviapuyana@knights.ucf.edu

Date

Name
Address
Address

Dear Name -

During the last two months, I have sent you several mailings about an important research study titled "School Psychologist Perceptions Regarding Implementation of Response to Intervention with English Language Learners" that I am conducting as part of my doctoral work in Education at the University of Central Florida.

The purpose of the study is to better understand the experiences of school psychologists in our state in implementing Response to Intervention (RtI) with native English speakers and with English language learners (ELLs).

The study is drawing to a close, and this is the last contact that will be made with the random sample of school psychologists within the state of Florida selected for participation.

I are sending this final contact because of our concern that people who have not responded may have had different experiences from those who have. Hearing from everyone in this small statewide sample helps assure that the survey results are as accurate as possible. Your participation truly will make a difference not only in our study but in the experiences of school psychologists like you.

I want to assure you that your participation in this study is voluntary, and if you prefer not to respond, that's fine. If you are not a school psychologist within the state of Florida, and you feel we have made a mistake by including you in this study, please let us know by returning the blank questionnaire with a note indicating so. As a reminder, Dr. Stephen Sivo, Associate Professor of Educational Research, Technology, & Leadership, is serving as the faculty advisor for this study, and research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information regarding the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at 407-823-2901.

Finally, we appreciate your willingness to consider our request as we conclude this effort to better understand the experiences of school psychologists in implementing RtI with native English speakers and with ELLs. Thank you very much.

Sincerely,

Olivia E. Puyana, Ed.S., NCSP
School Psychologist and Principal Investigator

P.S. Personalized comment (depending on time of year)

APPENDIX G: QUESTIONNAIRE

Response to Intervention & English Language Learners: A Survey of School Psychologists

Developed by: Olivia E. Puyana, Ed.S., NCSP, Candidate for Ed.D. at the University of Central Florida

The Florida Association of School Psychologists (FASP) encourages school psychologists to participate in surveys which increase the knowledge base about the practice of school psychologists in the state of Florida. This survey has been approved by the Research Committee and the FASP Executive Board.

General Instructions: Please select ONE answer for each question below. Mark the box for the answer you select with an X.

PART I: Graduate Training

START HERE: The following 19 questions pertain to your school psychology **graduate-level training** program (Masters, Specialist, and/or Doctoral level).

For the following 9 items, please think about the content of your graduate level courses. If you are currently a student in School Psychology, please think about the courses you have already taken as well as those remaining in your program plan. Respond to each question by marking ONE selection (Yes, No, or Don't Remember).

Item	Yes	No	Don't Remember
1. Did your program include course content that focused on the concept of culture?	☐	☐	☐
2. Did your program include course content on the development of cultural sensitivity?	☐	☐	☐
3. Did your program include course content on the impact of cultural bias?	☐	☐	☐
4. Did your program include course content on implementing Response to Intervention (RtI)?	☐	☐	☐
5. Did your program include course content *specifically* on meeting the needs of *English language learners* within RtI?	☐	☐	☐
6. Did your program include course content about empirically validated interventions for use within RtI?	☐	☐	☐
7. Did your program include course content *specifically* about interventions empirically validated *on English language learners* for use within RtI?	☐	☐	☐
8. Did your program include course content on second language learning?	☐	☐	☐
9. Did your program include course content on English for Speakers of Other Languages (ESOL) models?	☐	☐	☐

CONTINUE ON BACK →

Please select ONE answer for each question below. Mark the box for the answer you select with an X.

CONTINUE HERE

For the following 10 items, please think about your perceptions of your graduate level courses. If you are currently a student in School Psychology, please think only about the courses you have already taken. Respond to each question by marking ONE selection (Strongly Agree, Agree, Neither Agree Nor Disagree, Disagree, or Strongly Disagree).

Item	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
10. I believe that my graduate training enabled me to develop a working knowledge of the role of culture in my own life.	☐	☐	☐	☐	☐
11. I believe that my graduate training enabled me to develop a working knowledge of the role of culture in the lives of the students with whom I work.	☐	☐	☐	☐	☐
12. I believe that my graduate training enhanced my development of sensitivity to the cultures of other individuals.	☐	☐	☐	☐	☐
13. I believe that my graduate training enhanced my ability to identify the presence of cultural bias in my own experiences.	☐	☐	☐	☐	☐
14. I believe that my graduate training prepared me to effectively participate in the RtI process for students *whose native language is English.*	☐	☐	☐	☐	☐
15. I believe that my graduate training prepared me to effectively participate in the RtI process for *English language learners.*	☐	☐	☐	☐	☐
16. I believe that my graduate training provided comprehensive instruction on empirically validated interventions *for native English speakers* for implementation as part of RtI.	☐	☐	☐	☐	☐
17. I believe that my graduate training provided comprehensive instruction on empirically validated interventions *specifically designed for English language learners* for implementation as part of RtI.	☐	☐	☐	☐	☐
18. I believe that my graduate training prepared me to effectively understand the process of second language learning.	☐	☐	☐	☐	☐
19. I believe that my graduate training prepared me to effectively understand English for Speakers of Other Languages (ESOL) models.	☐	☐	☐	☐	☐

<u>General Instructions</u>: Please select ONE answer for each question below. Mark the box for the answer you select with an X.

PART II: Post-Graduate Training

CONTINUE HERE: The following 19 questions pertain to your post-graduate training experiences.

For the following 9 items, please think about your <u>participation in post-graduate training opportunities</u> available through your position as a school psychologist (i.e., district-based in-service programs, NASP- and FASP-sponsored trainings, etc.). If you are <u>currently a student</u> in School Psychology, please think about training experiences <u>outside of your university coursework</u> (i.e., NASP- and FASP-sponsored trainings, practicum & internship experiences, etc.). Respond to each question by marking ONE selection (Yes, No, or Don't Remember).

Item	Yes	No	Don't Remember
20. In the past 2 years, have you attended at least one training that focused on the concept of culture?	☐	☐	☐
21. In the past 2 years, have you attended at least one training that focused on the development of cultural sensitivity?	☐	☐	☐
22. In the past 2 years, have you attended at least one training that focused on the impact of cultural bias?	☐	☐	☐
23. In the past 2 years, have you attended at least one training that focused on the implementation of RtI?	☐	☐	☐
24. In the past 2 years, have you attended at least one training that focused on the implementation of RtI *specifically with English language learners*?	☐	☐	☐
25. In the past 2 years, have you attended at least one training that focused on reviewing empirically validated interventions for use with *native English speakers* within RtI?	☐	☐	☐
26. In the past 2 years, have you attended at least one training that focused on reviewing empirically validated interventions for use with *English language learners* within RtI?	☐	☐	☐
27. In the past 2 years, have you attended at least one training that focused on second language learning?	☐	☐	☐
28. In the past 2 years, have you attended at least one training that focused on English for Speakers of Other Languages (ESOL) models?	☐	☐	☐

General Instructions: Please select ONE answer for each question below. Mark the box for the answer you select with an X.

CONTINUE HERE

For the following 10 items, please think about <u>your perceptions of ANY AND ALL of your post-graduate training experiences</u> as a school psychologist. If you are <u>currently a student</u> in School Psychology, please think about training experiences <u>outside of your university coursework</u> (i.e., NASP- and FASP-sponsored trainings, practicum & internship experiences, etc.) Respond to each question by marking ONE selection (Strongly Agree, Agree, Neither Agree Nor Disagree, Disagree, or Strongly Disagree).

Item	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
29. I believe that post-graduate training opportunities have aided me in developing a working knowledge of the role of culture in my own life.	☐	☐	☐	☐	☐
30. I believe that post-graduate training opportunities have aided me in developing a working knowledge of the role of culture in the lives of the students with whom I work.	☐	☐	☐	☐	☐
31. I believe that post-graduate training opportunities have aided me in developing sensitivity to the cultures of other individuals.	☐	☐	☐	☐	☐
32. I believe that post-graduate training opportunities have aided me in identifying the presence of cultural bias in my own experiences.	☐	☐	☐	☐	☐
33. I believe that post-graduate training opportunities have prepared me to effectively participate in the RtI process for students *whose native language is English*.	☐	☐	☐	☐	☐
34. I believe that that post-graduate training opportunities have prepared me to effectively participate in the RtI process for *English language learners*.	☐	☐	☐	☐	☐
35. I believe that post-graduate training opportunities have provided a comprehensive review of interventions empirically validated on *native English speakers* for implementation as part of RtI.	☐	☐	☐	☐	☐
36. I believe that post-graduate training opportunities have provided a comprehensive review of interventions empirically validated on *English language learners* for implementation as part of RtI.	☐	☐	☐	☐	☐
37. I believe that post-graduate training opportunities have prepared me to effectively understand the process of second language learning.	☐	☐	☐	☐	☐
38. I believe that post-graduate training opportunities have prepared me to effectively understand English for Speakers of Other Languages (ESOL) models.	☐	☐	☐	☐	☐

PART III: Interventions

CONTINUE HERE: The following 14 items pertain to your experiences utilizing interventions within RtI.

For the following 12 items, please think about your perceptions related to implementing interventions as part of RtI. Respond to each question by marking ONE selection (Strongly Agree, Agree, Neither Agree Nor Disagree, Disagree, or Strongly Disagree). If you are currently a student in School Psychology, please think about your experiences with RtI through your practicum and internship.

Item	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
39. I am confident in my knowledge of the core curriculum used at my work location(s) as part of Tier 1 of RtI.	☐	☐	☐	☐	☐
40. I am confident in my knowledge of how the core curriculum used at my work location(s) as part of Tier 1 *specifically* addresses the needs of *English language learners*.	☐	☐	☐	☐	☐
41. I am confident in my knowledge of empirically validated interventions *for native English speakers* used at my work location(s) as part of Tier 2 of RtI.	☐	☐	☐	☐	☐
42. I am confident in my knowledge of interventions *specifically designed (empirically validated) for use with English language learners* at my work location as part of Tier 2 of RtI.	☐	☐	☐	☐	☐
43. I am confident in my knowledge of interventions *for native English speakers* used at my work location(s) as part of Tier 3 of RtI.	☐	☐	☐	☐	☐
44. I am confident in my knowledge of interventions *specifically designed (empirically validated) for use with English language learners* at my work location as part of Tier 3 of RtI.	☐	☐	☐	☐	☐
45. I am confident in my ability to analyze the impact of second language learning as it relates to intervention selection when RtI is implemented with English language learners.	☐	☐	☐	☐	☐
46. I am confident in my ability to analyze whether an English language learner's English for Speakers of Other Languages (ESOL) programming needs are appropriately matched with interventions within a framework of RtI.	☐	☐	☐	☐	☐
47. I am confident in my ability to analyze research to determine if an intervention has been empirically validated for use with *native English speakers* within RtI.	☐	☐	☐	☐	☐
48. I am confident in my ability to analyze research to determine if an intervention has been empirically validated for use *with English language learners* within RtI.	☐	☐	☐	☐	☐
49. I am confident in the breadth of my knowledge of interventions for *native English speakers* for use with RtI.	☐	☐	☐	☐	☐
50. I am confident in the breadth of my knowledge of interventions for *English language learners* for use with RtI.	☐	☐	☐	☐	☐

CONTINUE HERE

The following 2 items pertain to your experiences utilizing interventions within RtI.

Please provide a written response:

51. Please provide three examples of academic interventions (reading and/or math) for use with *native English speakers* that the RtI team at your school has recommended for implementation or with which you are familiar:

    a. _____

    b. _____

    c. _____

52. Please provide three examples of academic interventions (reading and/or math) for use with *English language learners* that the RtI team at your school has recommended for implementation or with which you are familiar:

    a. _____

    b. _____

    c. _____

PART IV: Cultural Experiences
Replicated with Permission from Dr. Guo-Ming Chen, University of Rhode Island

Instructions: Respond to each question by marking ONE selection (Strongly Agree, Agree, Neither Agree Nor Disagree, Disagree, or Strongly Disagree). Mark the box for the answer you select with an X.

Below is a series of statements concerning intercultural communication. There are no right or wrong answers. Please work quickly and record your first impression by indicating the degree to which you agree or disagree with the statement. Thank you for your cooperation.

Item	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
53. I enjoy interacting with people from different cultures.	□	□	□	□	□
54. I think people from other cultures are narrow-minded.	□	□	□	□	□
55. I am pretty sure of myself in interacting with people from different cultures.	□	□	□	□	□
56. I find it very hard to talk in front of people from different cultures.	□	□	□	□	□
57. I always know what to say when interacting with people from different cultures.	□	□	□	□	□
58. I can be as sociable as I want to be when interacting with people from different cultures.	□	□	□	□	□
59. I don't like to be with people from different cultures.	□	□	□	□	□
60. I respect the values of people from different cultures.	□	□	□	□	□
61. I get upset easily when interacting with people from different cultures.	□	□	□	□	□
62. I feel confident when interacting with people from different cultures.	□	□	□	□	□
63. I tend to wait before forming an impression of culturally-distinct counterparts.	□	□	□	□	□

CONTINUE HERE Item	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
64. I often get discouraged when I am with people from different cultures.	□	□	□	□	□
65. I am open-minded to people of different cultures.	□	□	□	□	□
66. I am very observant when interacting with people from different cultures.	□	□	□	□	□
67. I often feel useless when interacting with people from different cultures.	□	□	□	□	□
68. I respect the ways people from different cultures behave.	□	□	□	□	□
69. I try to obtain as much information as I can when interacting with people from different cultures.	□	□	□	□	□
70. I would not accept the opinions of people from different cultures.	□	□	□	□	□
71. I am sensitive to my culturally-distinct counterpart's subtle meanings during our interaction.	□	□	□	□	□
72. I think my culture is better than other cultures.	□	□	□	□	□
73. I often give positive responses to my culturally different counterpart during our interaction.	□	□	□	□	□
74. I avoid those situations where I will have to deal with culturally-distinct persons.	□	□	□	□	□
75. I often show my culturally-distinct counterpart my understanding through verbal or nonverbal cues.	□	□	□	□	□
76. I have a feeling of enjoyment towards differences between my culturally-distinct counterpart and me.	□	□	□	□	□

PART V: Demographics

Please provide responses to the following items by marking ONE selection or writing your response. Mark the box for the answer you select with an X.

77. Please identify your gender:

□ Male   □ Female

78. Please select the range that best describes the number of years you have been practicing as a school psychologist:

- □ Graduate student in School Psychology
- □ Less than 1 year
- □ 1 to 3 years
- □ 4 to 7 years
- □ 8 to 10 years
- □ 11 to 15 years
- □ 16 to 20 years
- □ 21 to 30 years
- □ More than 30 years

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79. **Please indicate the highest degree you have completed:**

    ☐ Currently in graduate school for School Psychology
    ☐ Masters'
    ☐ Specialist
    ☐ Doctoral

    If you have completed a doctorate, was this degree in School Psychology or a different discipline?

    ☐ School Psychology
    ☐ A different discipline (Please elaborate: _____)

80. **Do you consider yourself to be of Hispanic, Latino, or Spanish origin?**

    ☐ Yes
    ☐ No

    ☐ Prefer not to respond

81. **Please identify your race:**

    ☐ American Indian or Alaska Native
    ☐ Asian
    ☐ Black/African American
    ☐ Pacific Islander
    ☐ White/Caucasian
    ☐ Race Not Listed Above (Please elaborate: _____)

    ☐ Prefer not to respond

    (Please note, according to the 2010 Census, Hispanic/Latino/Spanish is not considered to be a racial category. This question is designed to reflect the Census categories.)

82. **Do you *fluently* speak more than one language?**

    ☐ Yes
    ☐ No

    If yes, please indicate which language(s): _____

83. **Please indicate your primary place of employment:**

    ☐ Currently in graduate school for School Psychology
    ☐ K-12 school system
    ☐ University system
    ☐ Private Practice
    ☐ Other (Please elaborate: _____)

Thank you *very much* for your time in completing this questionnaire!

Please share any additional comments you may have in the box provided below:

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APPENDIX H: FASP APPROVAL LETTER

Florida Association of School Psychologists

November 19, 2010

Olivia Puyana
University of Central Florida

Dear Ms. Puyana,

Thank you for your interest in conducting the research study entitled *School Psychologist Perceptions Regarding Implementation of Response to Intervention (RtI) with English Language Learners (ELLs)* with the Florida Association of School Psychologist (FASP) membership. Your request was reviewed by our Research Committee and approved by the FASP Executive Board on November 2, 2010.

The following stipulations apply:

1) FASP agrees to send you an Excel file that includes names, addresses, and email address of current members of FASP that have agreed to allow their names to be shared for research purposes.
2) You may use this information for ONLY the study which was approved by the Board.
3) All data will be collected and maintained by the researcher.
4) The following statement must be included in your introduction letter or email:

   "The Florida Association of School Psychologists (FASP) encourages school psychologists to participate in the completion of surveys which increase the knowledge base about the practice of school psychologists in the state of Florida. This survey has been approved by the Research Committee and the FASP Executive Board."
5) In appreciation of FASP's participation and support, we would like to request a summary article be provided following the completion of the research project for the FASP Newsletter and/or Website that is available to all FASP Members.

Please contact me or FASP's Research Chair for this year, Dr. David Schwartz if you have any questions and good luck to on the project.

Sincerely,

Rance L. Harbor, Ph.D.
Research Committee Chair 2010
Florida Association of School Psychologists

APPENDIX I: FLORIDA PS/RTI PROJECT IMAGE PERMISSION

1024 Grier Avenue
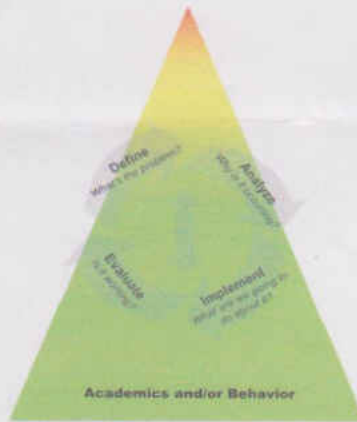Orlando, FL 32804

November 14, 2011

Dear Mr. Dorman:

This letter confirms our previous email communication regarding your permission to include the image "Tiered Model of School Supports and the Problem Solving Process" from the Florida PS/RtI Project. I, again, thank you for your permission. The image is the following:

This requested permission extends to any future revisions and editions of my dissertation including the non-exclusive world rights in all languages, and to the publication of my dissertation on demand by UMI. These rights will in no way restrict republication of the material in any other form by you or by others authorized by you. Your signing of this letter will also confirm that the Florida PS/RtI Project owns the copyright to the above-described material.

If these arrangements meet with your approval, please sign this letter where indicated below and return it to me in the enclosed return envelope. Thank you for your attention!

Sincerely,

Olivia E. Puyana, Ed.S., NCSP

PERMISSION GRANTED FOR THE USE REQUESTED ABOVE:

By: _____ (signature) ___11/18/11___ (date)
    Mr. Clark Dorman

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APPENDIX J: ISS PERMISSION TO REPLICATE

1024 Grier Avenue
Orlando, FL 32804

November 14, 2011

Dear Dr. Chen:

This letter confirms our previous email communication regarding your permission to utilize the 24-item Intercultural Sensitivity Scale (ISS; Chen & Starosta, 2000) as part of my 83-item questionnaire titled "Response to Intervention & English Language Learners: A Survey of School Psychologists." The citation for the material to be replicated is:
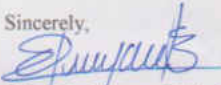
Chen, G., & Starosta, W. (2000). The development and validation of the Intercultural Communication Sensitivity Scale. *Human Communication, 3(1)*, 1-15.

As discussed in our email communication, I have indicated on the questionnaire itself that the 24 items are replicated with your permission. The 24 items are in a section titled "Part IV: Cultural Experiences." A comprehensive description of the ISS is included in the dissertation document.

This requested permission extends to any future revisions and editions of my dissertation including the non-exclusive world rights in all languages, and to the publication of my dissertation on demand by UMI. These rights will in no way restrict republication of the material in any other form by you or by others authorized by you. Your signing of this letter will also confirm that you own or your company owns the copyright to the above-described material.

If these arrangements meet with your approval, please sign this letter where indicated below and return it to me in the enclosed return envelope. Thank you for your attention!

Sincerely,

Olivia E. Puyana, Ed.S., NCSP

PERMISSION GRANTED FOR THE USE REQUESTED ABOVE:

By: _____ (signature) 11-23-11 (date)
Dr. Guo-Ming Chen

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APPENDIX K: IRB APPROVAL

University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**
FWA00000351, IRB00001138

To: **Olivia E. Puyana**

Date: **October 25, 2010**

Dear Researcher:

On 10/25/2010, the IRB approved the following minor modification to human participant research that is exempt from regulation:

Type of Review:	Exempt Determination
Modification Type:	The questionnaire was revised to include a statement required by FASP.
Project Title:	School Psychologist Perceptions Regarding Implementation of Response to Intervention (RtI) with English Language Learners (ELLs)
Investigator:	Olivia E Puyana
IRB Number:	SBE-10-07071
Funding Agency:	
Grant Title:	
Research ID:	N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Joseph Bielitzki, DVM, UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 10/25/2010 03:33:44 PM EDT

IRB Coordinator

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