

## ABSTRACT

Title of Document: PERCEPTIONS OF SPANISH/ENGLISH  
BILINGUAL SCHOOL PSYCHOLOGISTS  
REGARDING COMPETENCY IN  
ASSESSMENT AND FUTURE TRAINING  
NEEDS

Anne Marie Peña, Doctor of Philosophy, 2012

Directed By: Professor William O. Strein, Counseling,  
Higher Education, and Special education  
Department

With the changing demographics of the school population, the need for bilingually competent school psychologists has become increasingly important. The current study examined the influence of training and regional factors on Spanish-speaking, bilingual school psychologists' self-perceptions of competence regarding assessment of non-native English-speaking students (English Language Learners (ELL)), of the value of their training experiences related to bilingual assessment, and of the need/desire for a separate bilingual school psychology credential or certificate. Research participants completed an internet-based survey of individuals who self-identified as Spanish-speaking bilinguals in the National Association of School Psychologists (NASP) bilingual directory. The response rate of 44% was substantially higher than all other published surveys relating to this same topic area. Overall, respondents viewed themselves as very competent across all competency areas. In

addition, all training and experience items were seen as at least “somewhat valuable” by the vast majority of respondents. Region was not correlated with perceptions of competence or with the perceived value of training experiences. Finally, an overwhelming majority of respondents indicated they believed a separate certificate or credential was very important for the field as a whole, as well as for themselves personally. Recent developments related to bilingual school psychology are discussed and the implications for the future development of bilingual credential are explored.

PERCEPTIONS OF SPANISH/ENGLISH BILINGUAL SCHOOL  
PSYCHOLOGISTS REGARDING COMPETENCY IN ASSESSMENT  
AND FUTURE TRAINING NEEDS

By

Anne Marie Peña

Dissertation submitted to the Faculty of the Graduate School of the  
University of Maryland, College Park, in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy  
2012

Advisory Committee:

Associate Professor William O. Strein, Chair

Assistant Professor Julia Bryan

Associate Professor Frances Kohl

Professor Courtland Lee

Assistant Professor Victoria Maria MacDonald

© Copyright by  
Anne Marie Peña  
2012

## Dedication

I would like to dedicate my dissertation to my parents, Emma and Abelardo Peña, who taught me that all things were possible through education.

## Acknowledgements

I wish to thank my committee members, Dr. Julia Bryan, Dr. Frances Kohl, Dr. Courtland Lee, and Dr. Victoria Maria MacDonald, who were generous with their time and expertise. A special thanks goes to Dr. Bill Strein, my graduate advisor and committee chairman for his countless hours of reflecting, reading, and most of all encouraging, throughout the entire process. I would also like to acknowledge and thank Dr. Valerie Cook-Morales who started me on this journey all those years ago, and without whom I might never have become a school psychologist. I would also like to thank my sister, Dr. Liz Peña for her humor, sarcasm, and support. Finally, I would like to thank Dr. Corry “Jeb” Kucik, my boyfriend and editor extraordinaire for his willingness to look over every word of my manuscript, time and time again.

## Table of Contents

Dedication .....	ii
Acknowledgments.....	iii
Table of Contents .....	iv
List of Tables .....	vi
 Chapter I. Introduction.....	 1
Introduction.....	1
A Growing Population and Need for Services.....	2
Hispanic ELL Achievement.....	3
Rationale for Study .....	4
Definition of Terms.....	7
Research Questions.....	8
 Chapter II. Review of the Literature.....	 10
Litigation, Law, and Professional Standards .....	10
A Framework to Guide Practice .....	12
School Psychologists' Role in Assessment .....	14
Assessment of ELL Children: Best Practices .....	14
Assessment of ELL Children: Typical Practices .....	16
Bilingual Assessment and Current Practices .....	19
Competencies Needed.....	20
Measuring School Psychology Competencies .....	26
Potential Factors Related to Perceived Competence .....	26
Barriers Related to Perceived Competence.....	27
The Need for Specialized Training .....	28
Perceptions of Training from the Field .....	29
Barriers to Bilingual Training.....	30
Current Training in the Assessment of ELL's.....	31
Current Status of Bilingual Programs .....	31
Bilingual Certification .....	33
Summary and Rationale for Study.....	35
 Chapter III. Methodology .....	 37
Participants.....	37
Spanish Proficiency, Skills, and Experience.....	39
Procedure .....	40
Instrumentation .....	40
Pilot Study.....	41
Survey Questions .....	42
Data Analysis .....	43

Chapter IV. Results .....	48
Percieved Competence.....	48
Valuable Experiences.....	54
Perception of Need for Credential .....	63
Qualitative Responses.....	66
Summary of Findings.....	67
Chapter V. Discussion .....	70
Percieved Competence.....	70
Valuable Experiences.....	72
Perception of Need for Credential .....	73
Limitations of Research .....	74
Implications for the Field.....	76
Implications for Future Research.....	76
Appendices	
Appendix A: Demographic Questionnaire and Survey .....	79
Appendix B: E-mail to Participants .....	85
Appendix C: Follow-up E-mail .....	86
Appendix D: Table of Survey Items, Independent/Dependent Variables, and Analyses.....	87
Appendix E: Tukey HSD Comparison as Number of Professional Development Workshops Attended as the Independent Variable .....	89
Appendix F: Tukey HSD Comparison for Courses Partially Covering Bilingual Assessment as the Independent Variable .....	90
Appendix G: Tukey HSD Comparison for Reading Journal Articles/literature on Bilingual Topics as the Independent Variable.....	91
References .....	92



## List of Tables

Table 1.	Demographics and Professional Characteristics of Respondents.....	37
Table 2.	Individual States used for Geographic Region Coding.....	39
Table 3.	Independent and Dependent Variables As Defined By Survey (Item Number).....	43
Table 4.	Loadings from Factor Analysis of Competency Items.....	45
Table 5.	Means and Frequencies Associated with Competence.....	49
Table 6.	Correlations Between Training Factors and Perceived Competence.....	51
Table 7.	Multiple Regression Analysis of Training Factors and Perceived Competence.....	52
Table 8.	Differences by Geographic Region.....	53
Table 9.	ANCOVA Perceived Competency by Region, Degree Earned as Covariate.....	53
Table 10.	Means and Frequencies For Perceptions of Valuable Experiences/Training.....	54
Table 11.	Multivariate Tests (Wilks' Lambda) of Perceptions of Value of Training Experiences.....	57
Table 12.	Univariate Analyses of Ratings of Value of Characteristics Experiences for Region as Independent Variable.....	58
Table 13.	Univariate Analysis for Number of Workshops as Independent Variable.....	59
Table 14.	Univariate Analysis for Number of Courses Covering Bilingual Assessment as Part of Broader Course assessment as Independent Variable.....	60
Table 15.	Univariate Analysis for Number of Courses Covering Bilingual Assessment as Independent Variable.....	61

Table 16.	Univariate Analysis for Highest Degree Earned Independent Variable.....	62
Table 17.	Correlation Coefficients Between Recentness of Training and Perceptions of Valuable Experiences.....	63
Table 18.	Means and Frequencies For Perceptions of Personal Importance for Specific Credential.....	64
Table 19.	Correlations Between Training Factors and Perceived Importance of Specific Credential.....	65
Table 20.	ANCOVA Perceived Importance of Credential by Region, Degree Earned as Covariate.....	66
Table 21	Interest/Disinterest in Specialized Credential or Certificate.....	67

## Chapter I: Introduction

The increasing diversity within the nation's public school population underscores the need for bilingual school psychologists who are competent and qualified in providing linguistically appropriate services to bilingual students. Through its standards for program approval, the National Association of School Psychologists (NASP) has continued to emphasize that training programs are responsible to better prepare school psychologists to meet the challenge of diversity (NASP, 2010a). As such, training programs that recruit and train bilingual graduate students are responsible for providing coursework, practicum, and supervision in bilingual school psychological services to impart competency in working as part of a collaborative, transdisciplinary assessment team. Naturally, it will follow that effective service delivery will hinge upon adequate bilingual assessment, knowledge of second language acquisition, and supervision by an experienced and trained professional.

Effective delivery of appropriate bilingual school psychological services is based upon several factors of competency, including standards for credentialing/certification, graduate training, and supervision. With respect to the issue of certification, there is interest in the field of school psychology to establish a uniform and reasonable set of guidelines that define the qualifications for certification or licensure as a "Bilingual School Psychologist" (E. Lopez & D. Páez, personal communication, February 9, 2009). It is recognized that such standards would not only include bilingual language proficiency, but also the successful completion of coursework to address second language development, and nondiscriminatory and bilingual assessment (Ortiz & Ochoa, 2005), as

well as fieldwork or internship supervision by a credentialed and appropriately trained bilingual professional.

### **A Growing Population and Need for Services**

According to the National Clearinghouse for English Language Acquisition (NCELA, 2011), approximately five million English Language Learners (ELL) were enrolled in public schools nation-wide during the 2008-2009 school year. This number is 10.8% of the total public school student enrollment in the U.S. and represents a 51% increase over the previous decade. Hispanic students represent a significant portion of the ELL student population. Nearly three-quarters (73%) of ELL students are Hispanic native Spanish-speakers (J. Batlova & M. McHugh, 2010). As of 2009, students who are ELL reflect immigration trends of the past decade, with most ELL students reporting Spanish as their native language, followed by Chinese (3.8%), Vietnamese (2.7%), French/Haitian Creole (2.1%), Hindi and related languages (1.8%), Korean (1.1%), German (1.1%), Arabic (1.2%), Russian (1.1%) and Hmong (1.1%) (J. Batlova & M. McHugh, 2010). While the ELL population has grown in virtually all states nationwide, students who speak a language other than English at home are not equally distributed across the country. They are heavily concentrated across the six states of Arizona, California, Texas, New York, Florida, and Illinois, totaling approximately 60 percent of the nation's entire ELL population. California has the most ELL students in the country, with nearly one-third of all of the nation's ELL students followed by Texas (13%), Florida (5%), New York (4%), Illinois (4%), and Arizona (3%) (NCELA, 2011). The states with the largest ELL student populations nearly mirror that of the states with the largest overall numbers of enrolled students with California having 13% of the total student population, followed

by Texas (9.8%), New York (5.6%), Florida (5.3%), and Illinois (4.3%) (NCES, 2011).

So, although the need for trained, competent personnel is greatest in the aforementioned states in terms of proportion of staff needed, the need is great in many states and school systems.

### **Hispanic ELL Achievement**

While the reasons for the Hispanic-White achievement gap are beyond the scope of this paper, the research generated by this debate will be referenced as it pertains to the broader achievement of ELL students. In its National Assessment of Educational Progress (NAEP), the National Center for Education Statistics (NCES) highlighted performance differences between Hispanic and White students (Rampey, Dion, & Donahue, 2009). In 2009, Hispanic-White gaps between average NAEP scores for mathematics and reading at grades 4 and 8 ranged from 21 to 26 points. The score differences between Hispanic students who were ELLs and Hispanic non-ELL students ranged from 19 to 39 points, comparable to or larger than the overall Hispanic-White gap. Finally, when contrasting non-ELL Hispanic students and White students another comparison gap emerged. Here the gaps were smaller, and ranged from 14 to 19 points suggesting that the overall Hispanic-White gap is influenced by the relatively low performance of Hispanic ELL students.

Poor academic performance is the single strongest predictor of dropping out of school. The NCES “Trends in High School Dropout and Completion Rates in the United States: 1972–2008” convincingly demonstrated that dropout rates for Hispanics substantially exceed those for Asians and Whites. Although gaps in high school attainment continue to narrow, the disparities in the graduation rates between Hispanics

and other racial/ethnic groups persist in the double-digits. The 2008 Hispanic high school dropout rate of 1.2 million Hispanics between the ages of 16 and 24 is nearly double that of African-Americans and more than three times that of Asians and Whites. Despite these differences, Hispanics are making educational gains over generations. Nearly 33% of 16- to 24-year old Hispanic *immigrants* were dropouts in 2008, while approximately 10.5% of *U.S-born* Hispanics were (Chapman, Laird, & KewalRamani, 2010).

Although we are aware of the increasing numbers of ELL students in special education and in our nation's schools overall (USDOE, 2010), the research base on disproportionality of ELL students in special education is limited (Keller-Allen, 2006). Keller-Allen further notes that what little research there is available on the topic suggests a wide range of variability. According to the National Education Association (NEA, 2007), ELL students are under-represented in special education programs nationally, with variability noted across the country. Some researchers suggest that over- or under-representation may depend on the size of the ELL population within the school district. For example, Keller-Allen (2006) suggests that ELL students are over-represented in school districts with small ELL populations and under-represented in school districts with higher ELL populations. In those districts where larger ELL populations exist, wide variability in identification of ELLs as students with disabilities is also noted. In Artiles' 2005 study of California urban school districts findings indicated disproportions related to grade level, language proficiency, disability category, and type of language support program. Specifically, rates of intellectual disabilities, learning disabilities, and speech/language impairment among ELLs were adjudged to be higher in the upper elementary and secondary grades. ELLs with limited language proficiency in their native

language and English and ELLs who received less native language support were likewise over-represented in special education across grade levels.

### **Rationale for Study**

ELL children are often suspected of having learning difficulties due to the natural process of second language development. As such, they are more likely to be referred for a special education assessment to determine the presence of a learning disability (National Education Association, 2007) than are native English speakers. Although it is best practice for a bilingual school psychologist to conduct an assessment in the native language of the referred student, research findings have noted the shortage of bilingual personnel needed to provide education services to ELL students (e.g., Vazquez-Nuttal, 1987; Curtis, Hunley, Walker, & Baker, 1999). Further compounding this shortage is the fact that the ability to communicate in a student's native language does not ensure appropriate, nondiscriminatory assessment of that student (Ortiz & Ochoa, 2005). Moreover, professionals who work with ELL children may lack the knowledge of how to conduct assessments and appropriately interpret findings (Ochoa, Rivera & Ford, 1997). The increasing number of ELL students combined with the few graduate programs providing a focus on bilingual training magnifies the shortage of qualified personnel able to serve this growing population.

Despite the growing population of ELL students, a disproportionately small percentage of school psychologists identify themselves as bilingual (Curtis, Hunley, Walker, & Baker, 1999). As of this writing, the National Association of School Psychologists' bilingual school psychologist directory includes 548 members who identify themselves as "bilingual school psychologists." Combined, these individuals

represent 43 different languages across 40 states, Washington DC, Puerto Rico, and Canada, with Spanish, at 56%, representing the largest subset. Although it is assumed not all bilingual NASP members have chosen to identify themselves in the directory, the 2010 bilingual directory membership represents only 2.1 % of all NASP membership.

In a recent survey of randomly selected NASP members, respondents were asked if they fluently spoke a language other than English (NASP, 2008). Only about 11% of the total respondents reported fluency in at least one language other than English. Of the 30 languages reported, nearly 48% indicated Spanish was the language spoken fluently, followed by French (13.1%) and American Sign Language (7.8%), suggesting that only about 6% of NASP members are fluent in Spanish. With Spanish being the dominant language spoken amongst school psychologists after English, it is assumed that Spanish would be the language most likely to be addressed by graduate programs.

Special education assessment continues to dominate the practice of school psychologists. Curtis, Grier, Abshier, Sutton, and Hunley (2002) found that respondents were spending 41% of their time in assessment. While Fagan and Wise (2007) found that a pattern of providing a wide range of services over the past two decades, they also found school psychologists continue to spend the majority of their time in assessment. Most recently, Larson and Choi (2010) confirmed these results as well. In their random survey study of NASP members, the estimated proportion of time spent in traditional assessment was 47%, followed by consultation (12%), and team collaboration (11%). Based on two factors: (a) Spanish being the dominant language spoken by bilingual school psychologists, and (b) assessment being the activity in which school psychologists spend



the largest portion of their time, this research will focus on Spanish-speaking bilingual school psychologists in the area of assessment.

The purpose of the current study is to examine the perceived competence of Spanish-speaking bilingual school psychologists as service providers to dominant Spanish-speaking students and the factors that influence their perceptions of competence, in the area of assessment and determine factors that influence a desire for certification in bilingual school psychology. Through use of a survey developed for this purpose, particular attention was given to the type of training practitioners received and to the perceived effectiveness of graduate and professional development training. Specifically, the year practitioners completed their training, level of training (doctoral, specialist), geographic region, and whether they attended a program offering a bilingual certification was considered, as these factors may relate to the perceived assessment competence when working with ELL students. It is important for school psychology programs to produce bilingual practitioners who are competent, but it is unclear what factors make up perceived competence. Hence, the results of this exploratory study will inform the current discussion on the assessment competence and training of bilingual school psychology practitioners. Further, the findings will contribute and extend the current research body. Lastly, data obtained will inform development of more uniform practices for the graduate training of bilingual school psychologists.

### **Definition of Terms**

The following is an overview of terms used throughout this study.

*Bilingual Assessment:* The process of evaluation, which allows for the use of two languages throughout the assessment process. For the purpose of this study, bilingual

assessment will refer to the assessment of a student who is dominant in Spanish, and where the evaluator primarily uses Spanish as the mode of communication.

*Bilingual School Psychologists:* Credentialed school psychologists who are able to speak their primary language and to speak (or sign) at least one other language at, at least, a competent level of proficiency. For the purposes of this study, bilingual school psychologists will refer to those school psychologists who speak English and Spanish in their practice.

*English Language Learner (ELL):* A student who has a first (home, primary, or native) language other than English and is in the process of acquiring English.

## **Research Questions**

The following specific research questions will be addressed:

- I. To what degree do bilingual school psychologists perceive themselves to be competent in their training when evaluating ELL students?
  - Ia. What (training and regional) factors are most strongly associated with the perceived competence of bilingual school psychologists when working with ELL students?
    - A. To what degree does training influence perceived competence
      - i. Recentness of graduate training
      - ii. Level of training (i.e., specialist, doctoral)
      - iii. Bilingual school psychology graduate coursework
      - iv. Professional development training
      - v. Bilingual supervision
    - B. Are there differences in perceived competence depending on geographic region?

- II. What experiences and/or training do bilingual school psychologists believe to be valuable in developing competence in bilingual assessment?
- IIa. What (training and regional) factors are most strongly associated with bilingual school psychologists' perceptions of valuable training and experiences?
- III. To what degree do bilingual school psychologists believe that there is a need in the field for specific credentialing of bilingual school psychologists?
- IIIa. What (training and regional) factors are most strongly associated with the bilingual school psychologists' perceptions of the need for specific credentialing.

## Chapter II: Review of Literature

### **Litigation, Law, and Professional Standards**

Concerns with traditional methods of assessing and evaluating ELL students have been identified through a history of litigation and legislation. Specifically, the outcome of two landmark cases, *Diana v. State Board of Education* (1970) and *Larry P. v. Wilson Riles* (1971), led to the establishment of regulations, which have promoted the use of more ethical and valid assessments of ELL students' cognitive abilities. In both cases brought in the state of California, plaintiffs emphasized the disproportionately high minority enrollments in what was then called educable mentally retarded (EMR) programs. In the case of *Diana vs. the California State Board of Education*, nine Mexican-American children with limited English skills had been identified as mentally retarded based on results of several IQ tests that had been administered in English. In the class action suit, the plaintiffs argued: a) the tests were inappropriately administered in English to children whose primary language was Spanish, and b) the tests administered did not adequately represent the cultural background of the Mexican migrants (Figueroa & Artiles, 1999). The court ruled that the Spanish-speaking students had been inappropriately evaluated and placed in special education, and ELL children cannot be placed in special education programs based on the use of culturally biased tests or tests administered in English. As part of a consent decree, the court ordered that ELL children must be tested in both their native language and in English. In addition, the court determined nonverbal tests could be used as *part* of the assessment process. Finally, school districts in California were required to retest children previously diagnosed as mentally retarded using nonverbal sections of tests. After being retested in their dominant

language, the students exhibited an average gain of 15 standard score points, and seven of the nine children no longer met the criteria for mild mental retardation (Olmedo, 1981). Because of Diana, federal and state laws now contains provisions for testing in a child's primary language so no child will be placed into special education solely because of a limited ability to speak English.

While *Diana vs. the California State Board of Education* was the catalyst in litigation that identified language as a potential barrier in intelligence testing and special education placement, several similar cases soon followed that would move the topic of assessment bias to the forefront of legislation. *Larry P. vs. Riles* was a class-action case that focused on IQ testing of African-American students. Similarly to Diana, it was argued that the African-American students had been inappropriately placed in EMR classrooms solely on the results of IQ tests. It was argued that IQ tests were culturally discriminatory against African-American students, as a disproportionate number of African-American students had been placed in EMR classrooms. The court held that IQ tests were culturally biased against African-Americans and initially banned California school systems from their use when evaluating African-American students for special education programs. Although some of the findings in the *Larry P. vs. Riles* (1971) decision were later vacated in 1994 by the U.S. Court of Appeals for the Ninth Circuit in *Crawford v. Honig*, the initial outcome of both cases underscored the need for tests that are administered to minority children to be validated for use with that population (Valdés & Figueroa, 1994). Further, the two cases established dramatic changes in the identification of EMR children and in their education programming. As such, many of the court findings were ultimately incorporated into Public Law 94-142, The Education for

All Handicapped Children Act (1975) in the form of provisions ensuring nondiscriminatory assessment and assessment in the students' native language (Figueroa, Sandoval, & Merino, 1984). These provisions were reaffirmed in Public Law 99-457 (Education of the Handicapped Amendments) and extended in the Individuals with Disabilities Education Act (IDEA) of 1990. Most recently, the provisions were again reaffirmed in the Individuals with Disabilities Education Improvement Act (IDEIA) of 2004, which requires that all assessment procedures be nondiscriminatory and psychometrically valid for their intended use.

In addition to litigation and legislation, professional standards have also been established to ensure valid assessment of ELLs. The Standards for Educational and Psychological Testing (Joint Committee, 1999) indicated that when testing an examinee who is proficient in two or more languages for which the test is available, the examinee's language proficiencies should be determined. The test generally should be administered in the test-taker's more proficient language, unless proficiency in the less proficient language is part of the assessment. The National Association of School Psychologists further supports this position in the NASP principles for Professional Ethics (2010c), which states school psychologists select assessment instruments and strategies that are reliable and valid for the child and the purpose of the assessment. Further, it is stated that assessments are to be conducted in the client's dominant spoken language or alternative communication system.

### **A Framework to Guide Practice**

In 1949, the Boulder Conference on Graduate Education in Clinical Psychology established the "scientist-practitioner" model as the foundation for graduate education in

clinical psychology. According to Fagan and Wise (2007), this model was also adopted by the field of school psychology, and is linked to the accreditation process of graduate training programs. Training from a scientist-practitioner orientation naturally calls for an integration of science and practice; students should be prepared to both conduct research and work effectively with clients (Fagan & Wise, 2007). When the Spring Hill Symposium (1980) and the Olympia Conference (1981) were held, more than 30 years had passed since the Boulder Conference. The themes and goals identified at Spring Hill and Olympia created the impetus behind many seminal documents defining practice and training in school psychology. NASP has most recently published the third edition of the NASP Blueprint (Ysseldyke et al., 2006). BPIII, the newest Blueprint, integrates eight Domains of Competence, including foundational competencies such as (a) interpersonal and collaborative skills; (b) diversity awareness and sensitive service delivery; (c) technological applications; (d) professional, legal, ethical, and social responsibility; and functional competencies such as (e) data-based decision making; (f) systems-based service delivery; (g) enhancing the development of cognitive and academic skills; and (h) enhancing the development of wellness, social skills, mental health, and life competencies. Overall, the BPIII model was envisioned to be progressive, guiding school psychology practice toward enhanced standards for training, practice, and research. The disciplines of professional, legal, ethical, and social responsibility; diversity awareness; and data-based decision making undergird essential assessment skills needed by bilingual school psychologists. BPIII advocates that school psychologists adhere to all ethical and legal requirements, including legislative and judicial decisions, and that they recognize their own limits of competency. In addition, school psychologists should be well versed

in a variety of assessment methods, which include standardized norm-referenced tests. Lastly, school psychologists must recognize the impact of language and culture on school performance, and must not use inappropriate or unsystematic methods for assessing English language learners. Combined, these skills highlight the importance of training competent bilingual professionals.

### **School Psychologists' Role in Assessment**

School psychologists working in public schools spend the majority of their time with students who have, or are suspected to have, a disability requiring special education services (Reschly, 2000). In doing so, school psychologists continue to spend most of their time in the practice of assessment (Reschly & Wilson, 1995), with findings from research over the past 30 years (e.g., Ramage, 1979; Smith, 1984) estimating that 50-82% of total work time has been spent in this manner. According to Flanagan and Ortiz (2003), tests are an entrenched part of the school psychologist's assessment role and are a requisite tool used in that process. These authors further note that over the past several decades, there have been advances to theory and research in the area of test development; however, while theory is considered a guiding force behind both measurement and interpretation, little has changed with how school psychologists approach and practice intellectual assessment.

### **Assessment of ELL Children: Best Practices**

Formal training of psychologists must address both appropriate assessment and interventions. Further, specific awareness, knowledge, and skills are required when working with ELL students (Keitel, Kopala, & Adamson, 1996). As such, the Guidelines on Multicultural Education, Training, Research, Practice, and Organizational Change for



Psychologists (APA, 2002), attempted to ensure that when psychologists provide services to ELL individuals, those services are delivered in a culturally competent manner. Various guidelines specific to ELL children recommend that a student's language proficiency and acculturation be evaluated, and that unbiased assessments and interventions be utilized to best meet the student's needs (e.g., Keitel et al., 1996; Paniagua, 1998; Paredes-Scribner, 2002). These guidelines are guided by federal regulations, which provide a short list of procedures that should be followed when assessing ELL students. Regarding psycho-educational testing of ELL students, IDEA 2004, Part B stipulates that assessments do not discriminate on a racial or cultural basis; are given in the child's native language or other mode of communication, unless it is clearly not feasible to do so; and measure the extent of any disability or special education need rather than of English-language skills.

In addition to association guidelines and federal regulations, the literature on culturally competent assessment practices has provided direction regarding the approach school psychologists should take when working with ELL children. In a Delphi study of expert opinions, Rogers and Lopez (2002) asked respondents to rate the importance of 185 cross-cultural competencies. The authors measured the items using a 5-point Likert scale, which ranged from (1) very important to (5) very unimportant. Items that received a mean score between 1.0 and 1.49, and reached a 96% consensus or greater were identified as critical items. Based on these criteria, critical items relating to assessment practices with ELL children included: (a) engaging in nonbiased assessment; (b) the use of alternative assessment methods (e.g., dynamic, ecological); (c) awareness of the cultural context of the child and of the interaction of culture and assessment; (d)

knowledge of the second language acquisition process; and (e) the appropriate use of interpreters.

Additionally, Ortiz and Ochoa (2005) have presented a multidimensional assessment model for the assessment of ELL students. The authors suggested that practitioners working with ELL students consider the following four variables: (a) current grade of the student; (b) mode of assessment delivery (reduced culture/language, native language, English, or both languages); (c) previous/current types of educational programs; and (d) the student's degree of language proficiency in English and Spanish.

Guided by these studies, we can outline the following school psychology competencies for the assessment of ELL students: (a) administer assessments that are racially and culturally non-biased, (b) assess ELL children in their native (i.e., dominant) language, (c) ensure assessments measure the extent to which an ELL child has a disability and needs special education rather than measuring a child's English-language skills, (d) evaluate language proficiency with both formal and informal measures, (e) assess learning opportunities (e.g., does the child have opportunities to develop English skills in a supportive, bilingual environment, or is English only being used in an English-only classroom environment?), and (f) understand second language acquisition factors related to assessment (Figueroa et al., 1984; Ochoa, Rivera, & Ford, 1997; Ortiz, 2002; IDEIA, 2004).

### **Assessment of ELL Children: Typical Practices**

Researchers have studied school psychologists' assessment practices when evaluating ELL children (McCloskey & Athanasiou, 2000; Ochoa, Powell, & Robles-Piña, 1996; Vazquez-Nuttall, 1987). When comparing the results of research findings

addressing assessment measures used by school psychologists for cognitive assessment of ELL students, it was found that practitioners who assess ELL students use test batteries that are similar to those used for English speakers (Ochoa, Powell, & Robles-Piña, 1996). In one of the more recent studies, Ochoa, Powell, and Robles-Piña (1996) analyzed instruments that school psychologists were using with ELL children. Findings from the study indicated that of the nearly 80 instruments reportedly used by school psychologists, the most common ones were the Wechsler Intelligence Scale for Children-R/Wechsler Intelligence Scale for Children-III (WISC-R/WISC III) (52%), Draw-A-Person (47%), Leiter-R (40%), WISC-R/WISC-III Performance Scale only (38%), Kaufman Assessment Battery for Children (KABC) (36%), Test of Nonverbal Intelligence/Test of Nonverbal Intelligence-2 (TONI) (36%), and Ravens Progressive Matrices (25%). Similarly, in a survey of school psychologists' assessment practices with ELLs (McCloskey & Schicke-Athanasίου, 2000), the majority of practitioners chose the WISC-III (57%) followed by the TONI-3 (43%), KABC (25%), Comprehensive Test of Nonverbal Intelligence (CTONI) (9%), Differential Ability Scale (DAS) (9%), Matrix Analogies Test (MAT) (2%), Peabody Picture Vocabulary Test (PPVT-R) (2%), and Universal Nonverbal Intelligence Test (UNIT) (1%).

In a similar survey sampling of 1600 NASP members nationwide, Wilson and Reschly (1996) found the Wechsler Intelligence Scales, Bender-Gestalt, and Draw-A-Person to be most often utilized for psycho-educational assessment for all children. The authors concluded that the frequency and specific measures employed were very similar to those reported over the previous decades.

The small differences between the armamentarium of tools that practitioners employ in the assessment of English speaking versus linguistically diverse students suggests that practitioners serving the latter population may be ignoring key factors such as inappropriate norms, linguistic and cultural confounds, and other threats to validity (Ortiz & Dynda, 2005). Ortiz and Dynda further suggest the underlying issue is not about what the “right” test is but rather that tests chosen are often administered and interpreted without respect for the influence of culture and language on test performance.

Inadequate training and lack of materials may also contribute to school psychologists’ continued use of outdated procedures, perpetuating treatments that are of questionable validity. In a survey of school psychologists examining the acceptability of methods used to assess the cognitive ability of ELL students, 87% responded that the use of tests administered in English when a student is dominant in English were usually or always acceptable (Bainter & Tollefson, 2003). On the other hand, participants rated several assessment practices as never or rarely acceptable. For example, 74% of respondents felt that either administering tests in English when a student is dominant in another language, or using nonverbal tests that require oral instructions without the presence of an interpreter, were considered to be never or rarely acceptable. While these specific findings suggest that a large majority of practitioners do not believe it is appropriate to administer tests in English when a student is dominant in another language, it also highlights that over 25% of the respondents indicated otherwise. The disparity of opinions and practice patterns is shown to be more evenly split when it comes to the appropriateness of intra-testing translation: 56% of respondents felt having an interpreter translate traditional tests from English to another language during the testing session was

never or only rarely acceptable, while the other 44% believed this practice to be sometimes, usually, or always acceptable.

### **Bilingual Assessment and Current Practices**

Appreciating the complexity of assessing bilingual students must begin with a definition of the phrase “bilingual assessment.” Typically, bilingual assessment refers to the evaluation, observation, and interview *of* bilingual students *by* bilingual school psychologists. In the United States, this is commonly understood to mean the assessment of Spanish-speaking students by school psychologists who are fluent in both Spanish and English. However, “bilingual assessment” is not synonymous with “assessment of bilinguals,” which is the assessment of bilinguals by school psychologists not fluent in the student’s primary language. Professionals should recognize the distinct qualities of these two processes, because in the former case the bilingual school psychologist is able to conduct assessment activities not available to the monolingual school psychologist even with the aid of interpreter. Hence, whenever a student who is a non-English or limited English speaker is referred for assessment, a trained and competent bilingual school psychologist proficient in the same language of the student should ideally perform the assessment (Lopez, 1995).

The NASP Principles for Professional Ethics (NASP, 2010c) advocate that school psychologists respect differences in cultural, ethnic, and linguistic backgrounds, selecting appropriate assessment or treatment procedures, techniques, and strategies with diverse populations. Hence, the goal of both *bilingual assessment* and *assessment of bilinguals* is to achieve equity and accuracy in evaluation to the greatest possible extent. Naturally, equity is not inherent in all assessment methods employed with linguistically diverse

populations. For example, simply possessing fluency in the student's first or second language does not automatically reduce or eliminate inaccuracies in assessment. In addition, while the use of an interpreter aids in communicating with the student and the parents, it does not necessarily reduce bias or result in equitable assessment, as traditional assessment practices and all their inherent biases are easily replicated in any number of languages. Similarly, "nonverbal" assessment tools do not automatically guarantee bias reduction or equity, as these modalities rely on the examiner's skills of rapport building and effective nonverbal communication. Nonverbal methods, including the few that are comprehensive and multidimensional, are still limited in the range of cognitive skills they can measure. Ideally, assessment of bilingual students should focus on a comprehensive framework for nondiscriminatory assessment that can be applied systematically by any school psychologist, bilingual or not. Programs that educate bilingual school psychologists should impart the same level of skills, training, and supervision as English-only school psychology programs. For example, a bilingual Spanish-speaking school psychology student must have exposure to a curriculum that includes Spanish-language assessment tools, a Spanish-speaking school population, and supervision by a Spanish-speaking school psychologist if he or she is expected to someday serve a Spanish-speaking student body.

### **Competencies Needed for Bilingual Assessment**

Nearly 30 years ago, discussion of multicultural and bilingual competency of school psychologists began, leading to the development of identified competencies for working with ELL children and their families. Figueroa et al., (1984) identified (a) proficiency in the second language, (b) cross-cultural awareness, (c) assessment skills, (d)

knowledge of language development, (e) ability to work with interpreters, and (f) knowledge of bilingual education curriculum as important competencies for school psychologists working with ELL students. Similarly, Rosenfield and Esquivel (1985) highlighted bilingual proficiency, cross-cultural knowledge, and assessment as competencies requisite to the preparation of culturally competent bilingual school psychologists at Fordham University. Based on these authors' published recommendations, the New York State Education Department (NYSED) and New York State school psychology trainers collaboratively created a bilingual specialization for school psychologists (Lopez & Rogers, 2007). Consequently, bilingual school psychologists in New York now complete a series of courses on bilingual and multicultural issues, pursue a bilingual fieldwork experience, and must demonstrate bilingual language proficiency to obtain bilingual certification.

Researchers in the field of bilingual assessment (Figueroa et al., 1984; Valdes & Figueroa, 1994; Rhodes, Ochoa & Ortiz, 2005) recommend several procedures and considerations for conducting assessments. However, despite experts' recommendations regarding appropriate assessment practices, research findings demonstrate that many bilingual school psychologists continue to use inappropriate translation methods or are overly dependent on simple nonverbal measures to compensate for barriers to communication. For example, results of a study of psychological and educational assessment practices used with elementary school ELL students revealed that the testing approaches most frequently used were nonverbal measures and translated tests (Nuttall, 1987). Nuttall noted that the assessment instruments used were not normed on ELL populations and, in many local education areas (LEAs), translations occurred while

testing was in progress, further calling into question the validity and accuracy of these practices.

More recently, Ochoa, Powell, and Robles-Piña (1996) surveyed a random sample of NASP members selected from states with a high percentage of ELL students. When specifically asked about their assessment practices with bilingual and ELL students, the majority of respondents reported that intelligence testing continued to be conducted primarily in English, with the WISC- R and WISC-III being most heavily relied upon, even when a test in the student's native language other than English might be available.

Finally, Ochoa, Rivera, and Ford (1997) noted that while school psychologists may conduct bilingual assessments, a large majority did not believe they had adequate training in this area. In their study evaluating the competencies of school psychologists who engaged in bilingual psycho-educational assessment, Ochoa et al. found that while 57% of NASP member respondents conducted bilingual assessments, nearly 87% felt they had not been adequately trained to optimally conduct such assessments. Further, only 17% of the respondents reported having taken a course in bilingual assessment. Of the 81% of school psychologists who reported they had not taken a course in bilingual assessment, 90% stated that a course addressing bilingual assessment was not offered in their training programs. When asked about training that covered second language acquisition as it relates to bilingual assessment, 59% responded they had received very little or no training in this area (Ochoa, Rivera, & Ford, 1997).

School psychologists are trained to deliver a range of services including assessment, consultation, counseling, and intervention/prevention services. Despite their breadth of training, school psychologists continue to spend the vast majority of their time



in assessment (Reschly, 2000; Fagan, 2002). With assessment constituting such an important component in the school psychologist's repertoire of skills, it follows that bilingual school psychologists should likewise have the skills needed to effectively assess ELL children. Attempting to provide services to ELL students in the absence of appropriate competencies raises ethical concerns about practitioners' ability to work within the boundaries of their competence as indicated in both APA (2002) and NASP (2010) ethics codes.

For over 30 years, researchers have attempted to evaluate the practices of school psychologists who work with ELL students (e.g., Figueroa et al., 1984; Vazquez-Nuttal, 1987; Ochoa et al., 1997). Much of this research has focused on surveying school psychologists regarding assessment practices and choices, as well as the amount of time spent engaged in specific services. To date, only one study (Ochoa et al., 1997) has addressed school psychologists' perceived competence in the assessment of ELL students.

In the 1997 study by Ochoa and colleagues, NASP member school psychologists in eight states (Arizona, California, Colorado, Florida, New Jersey, New Mexico, New York, and Texas) identified as having high Hispanic populations were surveyed on their self-perceived competencies and training on conducting bilingual assessments. Using a seven point Likert scale (1=Not At All, 7= Extremely Well), the authors posed four questions, asking respondents to rate their perceived competency on (a) cross-cultural issues, (b) second language acquisition, (c) how to conduct an assessment, and (d) how to interpret an assessment. A total of 1507 usable surveys were returned, representing a 29% response rate. The study found the majority of respondents reported less-than-adequate

training (identified by marking 1, Not At All, or 2, Very Little) in cross-cultural issues (60.3%), bilingual psycho-educational assessment (69.2%), and second-language acquisition factors (61.6%). Respondents rated themselves slightly higher on their ability to interpret an assessment, but still with 42.2% rating their training as a 1 or a 2. While this study provided an important foundation that guided development of needed competencies for serving ELL children, the focus did not specifically address competencies for *bilingual* school psychologists. Even though over 50% of the respondents in the Ochoa et al study reported they conducted bilingual assessment, only 33% indicated they spoke a language other than English. Hence, it is likely that many of these respondents used interpreters. Indeed, in a subsequent survey of a similar group of school psychologists who served ELL students, 78% reported they worked with interpreters to conduct bilingual assessment (Ochoa, Riccio, Jimenez, Garcia de Alba, & Sines, 2004).

Because the research in this area is limited, turning to other related fields whose practitioners are faced with similar issues may provide some insight into needed school psychologists' competencies. For example, speech language pathologists (SLPs) evaluate students in their primary language to determine eligibility for special education services, and like that of school psychologists, their field is similarly challenged by shortages of appropriately trained bilingual professionals. A study by Papoutsis-Kritikos (2003) surveyed the efficacy of the language assessment of bilingual/bicultural individuals by SLPs across five states. Individual survey respondents fell into one of three groups: (a) SLPs who learned a second language in the context of cultural experience (CE group), (b) SLPs who learned a second language via academic study (AS group), and (c) SLPs who

were monolingual (M group). In all three groups, a majority of SLPs (72%, 75%, and 85% of the CE, AS, and M groups, respectively) responded they were either “not competent” (score of 1) or “somewhat competent” (score of 2) even with the help of an interpreter, to assess an individual’s language development in a language that the SLPs did not understand or speak. Despite the common self-reported finding of low efficacy across all three groups, the AS and CE groups both felt they had higher personal efficacy in their assessment of speakers of other languages than did the M group. For example, SLPs in the CE group reported more personal efficacy in bilingual assessment than SLPs in the AS group, who in turn felt more competent than SLPs in the M group. Those in the M group attributed their low self-efficacy to their lack of knowledge about bilingual issues, the AS group remarked on their suboptimal language proficiency, and the CE group stressed both proficiency and experience as influences. Findings of low personal efficacy across all three groups replicate previous studies of SLPs (Roseberry-McKibbin & Eicholtz, 1994).

In another study by Roseberry-McKibbin and Eicholtz (1994), SLP survey respondents were asked what problems they encountered most frequently when assessing and providing therapy to ELL students with communication disorders. While this study did not specifically gauge self-efficacy, SLP responses reflected a general perceived lack of skills. For example, nearly 53% of SLPs self-reported a significant lack of knowledge of developmental norms in a child’s first language (values of 1 or 2 on a scale of 1-5, where 1 = very frequent problem area and 5 = infrequent problem area). Further, 37.8% of respondents cited lack of knowledge of second language acquisition, followed by lack of knowledge regarding children’s cultural characteristics (37.5%), and finally lack of

knowledge of the phenomenon of bilingualism (32.4%).

### **Measuring School Psychology Competencies**

Required school psychology competencies are outlined by the NASP Standards for Graduate Preparation of School Psychologists, comprising 10 domains of practice for which entry-level practitioners should have at least beginning competency (NASP, 2010a). Further indicated in the NASP Standards is that while profession-wide standards delineate basic skills, the particulars by which competencies are taught are left to the discretion of individual academic programs. Similarly, there is no single method that school psychology trainers and programs use to measure said competencies; broadly, earned grades appear to be the primary method of measuring competency in coursework, while competence in field-based experiences are often measured through observation by a school-based supervisor. School psychologists may measure their own competencies through self-review and continuing professional development methods.

### **Potential Factors Related to Perceived Competence**

Few studies have asked respondents to self-evaluate their competence in assessment practices. A review of the literature suggests that fewer still have attempted to find a relationship between perceptions of competence and other traits such as demographic characteristics, education level, and school levels served. In one such study, Nelson and Machek (2007) surveyed practicing school psychologists on their perceptions of their preparation, ability, and use of research-based techniques in reading assessment and intervention. The study examined whether school psychologists' preparation, perceptions of competence, and use of research-based techniques relating to reading assessment and intervention varied depending on demographic characteristics (level of training, years of

experience, age) or school population served (elementary, middle, or high school). Based on a mean of 1.26 (using a 4-point Likert scale, 1 = No time; 4 = Considerable time), the majority of those surveyed reported very little time was devoted to reading assessment in their formal education; many were not even required to take a class pertaining to the subject. In spite of this, nearly 64% of respondents rated their expertise in diagnosing reading problems as a 3 or 4 (Moderately high/High). However, just over half rated themselves as a 3 or 4 on knowledge of topics needed to conduct an assessment. For example, only 56.3% of respondent rated themselves 3 or 4 on their knowledge of early indicators of reading problems, 54.9% on knowledge of curriculum-based measurement in reading, and 54.4% in the rating of their ability to identify, interpret, and explain phonological processing deficits. With respect to demographic and professional characteristics, a low yet statistically significant positive correlation was found between participants' self-assessed ratings of expertise in diagnosing reading difficulties and both their age ( $r = .10$ ) and years of experience ( $r = .13$ ). Conversely, no significant differences were found between non-doctoral and doctoral-level participants or among the different populations served. While Nelson and Machek did not address self-perception of competence as it relates to *bilingual assessment*, they did, however, provide a snapshot of how background characteristics influence how school psychologists self-evaluate their competence in assessment.

### **Barriers Related to Perceived Competence**

While it is assumed school psychologists will encounter barriers within their practice, there is a lack of research specifically concerning barriers to perceived competence of school psychologists working in the field. However, literature pertaining

to overconfidence may constitute one barrier to perceived school psychologist competence. Broadly, the research suggests that school psychologists exhibit evidence of decision-making inconstancy and inaccuracy (Watkins, 2009). In a study of school psychologists' decision-making processes, Aspel, Willis, and Faust (1998) found school psychologists were likely to formulate diagnoses on the basis of limited information, suggesting study respondents had limited awareness of several factors that impinged upon their decision-making processes. Unrecognized overconfidence affected the techniques used to form predictions, leading ultimately to increased inconsistency and inaccuracy in professional decision-making.

### **The Need for Specialized Training**

With an ever-growing student body of English language learners (ELLs), school psychologists must address the complex questions regarding assessment, intervention, and consultation services relating to this population of children. As such, practice and training in bilingual school psychology have become increasingly important topics of interest to many NASP members (Lopez, 2009). For nearly 30 years, the field has seen an increase in the number of school psychology training programs that provide coursework and field experiences focusing on preparing future school psychologists to work with students from diverse language backgrounds. Additionally, a few training programs developed bilingual school psychology specializations (e.g., Arizona State, Fordham, Gallaudet, San Diego State, St. Johns, CUNY Brooklyn, CUNY Queens). Despite the competencies needed to work with ELL students having been well recognized (e.g., Figueroa et al., 1984; Rosenfield & Esquivel, 1985), there remains no clear agreement as to how to train school psychologists to deliver bilingual services. Bilingual graduate

students and school psychologists alike are therefore left wondering what training they need and where they should get it. This recognized shortfall prompted an interest in developing a bilingual school psychology interest group within NASP during 2008, the goal of which was to establish a forum to address bilingual issues in the field of school psychology. Not surprisingly, the group clamored for the development of training requirements for bilingual school psychologists (Sotelo-Dynega, 2009).

### **Perceptions of Training from the Field**

While interest in bilingual issues has recently grown through the NASP bilingual interest group, there is little information pertaining to the opinions and interests of the larger bilingual school psychology community. Although not on the topic of bilingual assessment, the findings of Nelson and Machek (2007) suggested that survey respondents emphasize future training needs for both assessment and interventions. Results from the study indicated that over 80% of participants rated their desire to increase their knowledge of reading assessment as important or very important. When considering demographic and professional characteristics, a low yet statistically significant negative correlation was found between respondents' self-assessed ratings of the importance of knowledge in reading assessment and both their ages and years of experience. This finding suggests that older school psychologists and those who had more years of experience felt they needed less training in reading than their younger and less experienced colleagues reported needing. No significant differences were found between non-doctoral and doctoral-level participants, nor among those working in different settings in the importance relegated to learning more about reading assessment. These findings suggest that school psychology practitioners, particularly those who are early in

their careers, are interested in gaining knowledge and skills in an area of practice not typically covered in their respective programs. With the increasing interest and need for bilingual school psychologists, it would stand to reason, that Spanish-speaking school psychologists might be equally interested in gaining competencies needed to work with the ELL population.

### **Barriers to Bilingual Training**

Barriers to bilingual training include a lack of guidelines in training development. In addition, there remain too few graduate programs that have the resources for training such as multicultural/bilingual faculty (Fagan & Wise, 2007), specialized curriculum (O'Bryon & Rogers, 2010), and appropriately trained and skilled field-based supervisors (Smith-Harvey & Struzzario, 2008). Recognized barriers to the establishment of a succinct and coherent set of bilingual training guidelines may be found in the profession's lack of expediency in the development of standards for practice. For example, the NASP standards are updated only once every ten years, and graduate programs may take several years to make changes to their curriculum based on each revision of the standards. In addition, while the NASP Standards for Graduate Preparation of School Psychologists (2010a) recommend the incorporation of curriculum, field experiences, and supervision for the training of all school psychology students, too few graduate programs incorporate these experiences specific to the needs of bilingual students. This is further exacerbated by the fact that only New York and Illinois have developed standards for bilingual training, leaving the majority of bilingual students and practitioners to piece together their own training experiences. Finally, the dearth of both bilingual training guidelines and graduate programs combine to provide a pool of



potential supervisors without the appropriate skills, training, or previous supervisory experience to guide others. The literature in school psychology has long supported the importance of quality supervision as well as the need for highly competent professionals (Hunley, Curtis, & Batsche, 2002; Harvey & Struzziero, 2008). This study does not address issues of supervision directly; however, it is important to acknowledge the limitations of supervisors lacking adequate bilingual competence.

### **Current Training in the Assessment of ELLs**

All NASP-approved programs are required to follow the NASP Standards for Graduate Preparation of School Psychologists, which stipulate cross-cultural competence in the training and practice of school psychologists (NASP, 2010a). As such, it is assumed all programs in the United States devote some time to the assessment of ELL students within the context of assessment courses. Because of questions regarding the appropriateness of instruments selected to use with ELL children (Figueroa et al., 1984), focus must be given to understanding the reliability and validity of such measures when engaging in assessment practices.

### **Status of Bilingual Programs**

Despite the recognition that bilingual certification should encompass several areas of proficiency few school psychology programs have offered a bilingual specialization. In 2006, NASP sent out a survey titled “Programs with a Focus on Multiculturalism and/or Bilingualism.” Trainers of programs were asked to complete questions regarding their commitment to diversity issues through the recruitment and retention of students from culturally and linguistically diverse backgrounds, multicultural curricular emphasis, faculty members involved in multicultural research and outreach, and participation in

related research and training grants. Only eight programs identified themselves as having a “bilingual specialization.” These programs included Brooklyn College-City University of New York, New Mexico State University, Queens College-City University of New York, San Diego State University, University of Arizona-Tucson, Gallaudet University, St. John’s University, and Texas A & M- College Station. While it is assumed not all bilingual programs self-identified through the survey, the low number of programs that did identify as having a bilingual specialty suggests professional training of bilingual school psychologists is rare.

It is vital to balance the need to increase the number of bilingual school psychologists while maintaining standards of practice at acceptable levels. For example, it is important that school psychologists engage in areas of practice in which they have been trained and are competent (NASP, 2010c). Therefore, it could be argued that the use of the title of “bilingual school psychologist,” should be restricted to individuals who have received training, education, and direct supervision. Integral to the acquisition of bilingual assessment competency is the development of a particular set of skills and abilities beyond simple proficiency in a second language. This element of competency would include knowledge and experience about first and second language acquisition, bilingual and ESL instructional methodology, research on minority group performance on tests, culture and the manner it can affect school behavior, and systematic methods for reducing bias and discrimination in assessment. Therefore, in order to reinforce the fact that best practice in “bilingual assessment” is not primarily concerned with the examiner's language proficiency, it must be continually emphasized that language proficiency is but one requirement for such competency in working with individuals who

are bilingual. Hence, while many school psychology graduate programs may be eager to accept a bilingual graduate school candidate, it is important for these programs to support the student through appropriate coursework and supervised experiences.

### **Bilingual Certification**

Since 2009, only two states offer a "bilingual certification" for school psychologists: New York and Illinois (Sotelo-Dynega, Geddes, Luhrs, & Teague, 2009). In Illinois, the state board of education issues a bilingual special education approval for individuals who qualify. Qualification criteria include:

1. School psychologist certification
2. Completion of specific coursework
  - a. Assessment of the bilingual child; or
  - b. Psychological/educational assessment of the ELL student with disabilities
3. Passage of the Illinois State Language Proficiency exam in the target language (including Spanish).

In New York State, the state department of education issues a supplementary bilingual education extension to those individuals who meet the following criteria (NYSDE, 2009):

1. Possession of a valid New York State certificate in pupil personnel service (i.e., school psychologist credential/certificate).
2. Content Core - Bilingual Education - three semester hours of prerequisite coursework, which must include theories of bilingual education and multicultural perspectives.

3. Evidence of matriculation in a collegiate registered bilingual extension program, which includes mentoring and supervision by the college or university. While enrolled in the program, candidates will be required to complete at least nine additional semester hours within a three-year period to qualify for a bilingual extension.
4. Documentation of proficiency in the target language: college assessment of language proficiency (can be fulfilled by achieving passing scores on the Target Language Proficiency Assessments (TLPA) of the New York State Teacher Certification Exams or New York State Bilingual Education Assessment (BEA).
5. Employment and support commitment while serving under the supplementary bilingual education extension.

In addition to Illinois and New York, some states offer bilingual certificates to teachers and other school professionals; however, school psychologists are deemed ineligible. For example, California offers a bilingual authorization, which requires individuals holding the appropriate service credential (e.g., teaching, speech language pathology) to pass a series of six combined tests from both the Bilingual Crosscultural, Language, and Academic (BCLAD) examination and the California Subject Examinations for Teachers - Languages Other Than English (CSET: LOTE). The tests cover the following areas

1. Language and Language Structure
2. Assessment and Instruction
3. Culture and Inclusion

4. Bilingual Education and Bilingualism
5. Geographic, Historical, Sociopolitical, and Sociocultural Contexts
6. Language and Communication (showing proficiency in the language other than English) Four subtests:
  - a. Listening
  - b. Speaking
  - c. Reading
  - d. Writing

In all of these cases, eligibility for the certification is not based exclusively on language proficiency, as linguistic proficiency of the examiner would be insufficient to constitute competency in the area of bilingual assessment.

### **Summary and Rationale for Study**

In summary, the field of school psychology has been involved in the training and practice of bilingual school psychologists for many years. The recent creation of the NASP bilingual interest group along with the findings from published studies, support the need for specialized training and supervision (e.g., O'Bryon & Rogers, 2010). While there have been previous studies that looked at training (e.g., Ochoa, Rivera, & Ford, 1997), current research is needed to guide the training needs of future practitioners. Overall limitations of previous research outlining school psychologists' use of assessment practices with ELL children include authors' use of monolingual and bilingual respondents (Ochoa, Rivera, & Ford, 1997). Further, in other studies (e.g., Ochoa, Powell, & Robles-Piña, 1996; McCloskey & Schicke-Athanasίου, 2000), survey respondents were from a select geographic area or state. In contrast to these previous

studies that surveyed school psychologists from specific geographic locations or surveyed NASP members as a whole, this study will focus on surveying a national sample of Spanish-speaking bilingual school psychologists. Focusing on this population, the study will develop a more rigorous understanding of training and supervision practices and ultimately, will contribute to charting a course for future training, supervision, and certification needs of bilingual school psychologists.

## Chapter III: Methods

### Participants

The participants were drawn from individuals listed in the 2010 NASP bilingual directory. Specifically, 414 individuals in the directory who identified themselves as Spanish-speaking and actively involved in the assessment of bilingual students were invited to participate. A total of 190 responses were received. Of those who responded to the survey, nine individuals did not complete all of the survey questions. Hence, 181 individuals completed the survey (refer to Appendix A) for a response rate of 43.7%. Table 1 contains the participant sample demographics. Of the usable surveys, there were 148 women and 33 men. Most respondents reported less than ten years of experience. The majority (73%) of the population identified their ethnicity as Hispanic/Latino. In addition, 58.9% identified their race as white. The majority (45.3%) of respondents held a specialist-level degree, followed by those holding doctorates and masters degrees. Respondents were represented in all geographic regions with the majority of respondents coming from California followed by New York (see Table 2).

Table 1

#### *Demographics and Professional Characteristics of Respondents*

Characteristic	N	Percent
<i>Sex</i>		
Female	148	81.8%
Male	33	18.2%
<i>Ethnicity</i>		
Hispanic/Latino	140	77.3%
Non-Hispanic	41	22.7%
<i>Race/Ethnicity<sup>a</sup></i>		
White	112	58.9%
African-American/Black	12	6.3%
Native American	4	3.2%

Table 1, Cont.

Characteristic	N	Percent
<i>Race/Ethnicity<sup>a</sup></i>		
American Indian/Alaskan	6	3.2%
Japanese	3	1.6%
Other Asian	2	1.1%
Other	53	27.9%
<i>Highest Academic Degree</i>		
Master's	42	23.2%
Specialist	82	45.3%
Doctorate	57	31.5%
<i>Geographic Location by Region</i>		
Western	51	28.1%
Central	28	15.4%
Northeast	55	30.3%
Southeast	47	25.9%
<i>Degree Location by Geographic Region</i>		
Western	55	30.3%
Central	20	11.0%
Northeast	58	32.0%
Southeast	48	26.5%
<i>Years Credentialed/Certificated/Licensed</i>		
≤ 5	56	30.9%
6-9	47	25.9%
10-14	24	13.2%
15-19	12	6.6%
20-24	20	11.0%
>25	22	12.1%
<i>License/Certification Held<sup>b</sup></i>		
State/Dept of Education Credential	169	93.4%
NCSP	85	47.0%
Other	45	24.9%
<i>Practice Level<sup>b</sup></i>		
Preschool	104	57.5%
Elementary	158	87.3%
Middle /Jr. High School	129	71.3%
High School	106	58.6%
Faculty/Trainer	34	18.8%
Private Practice	27	14.9%
Other	12	6.6%

<sup>a</sup>More than one answer allowed; race categories adapted from the US Census (2010)

<sup>b</sup>More than one answer allowed



Table 2

*Individual States used for Geographic Region Coding. Regions adapted from NASP*

Western	Central	Northeast	Southeast
Alaska	Illinois	Connecticut	Alabama
Arizona	Indiana	Delaware	Arkansas
California	Iowa	District of Columbia	Kentucky
Colorado	Kansas	Maine	Florida
Hawaii	Michigan	Maryland	Georgia
Idaho	Minnesota	Massachusetts	Louisiana
Montana	Missouri	New Hampshire	Mississippi
New Mexico	Nebraska	New Jersey	North Carolina
Nevada	North Dakota	New York	South Carolina
Oregon	Ohio	Pennsylvania	Tennessee
Utah	Oklahoma	Rhode Island	Texas
Washington	South Dakota	Vermont	Puerto Rico
Wyoming	Wisconsin	Virginia	
		West Virginia	

### **Spanish Proficiency, Skills, and Experience**

Using a five-point Likert scale where 1= novice and 5= fluent, the majority of respondents rated themselves as fluent in Spanish in the area of listening (82%), speaking (79.2%), reading (73.6%), and writing (57.9%). In addition, the majority of respondents gained their Spanish language skills by growing up in Spanish speaking household (72.5%), followed by taking courses in college/graduate school (43.3%), courses in high school (42.7%), other (32%), and going on cultural/language immersions (27%). Of those who responded, “other,” 69.4% indicated they were born, raised, or lived a significant amount of time in a Spanish-speaking country. The majority of respondents did not attend a graduate program that had a specialization in bilingual school psychology (82%); however, slightly more than half (52.2%) completed internship with a supervisor who was Spanish speaking.

## **Procedure**

Prior to conducting the study, Institutional Review Board (IRB) approval was obtained. Subsequent to obtaining IRB approval, a NASP study partnership was requested and obtained. The partnership allowed for NASP to send an e-mail (Appendix B) and survey link directly to prospective participants in the bilingual directory. The e-mail explained the purpose and benefits of the study, information regarding confidentiality, and how to contact the investigator if they had questions. If individuals chose to participate by clicking on the survey link, they were presented with information regarding informed consent and the survey. A follow-up e-mail (Appendix C) was sent approximately seven days after the first e-mail to remind and encourage those who have not yet completed the survey to do so. Approximately eight weeks after this follow-up email, a third and final follow-up e-mail was sent to those individuals who had not yet responded. As an incentive for participation, participants were given the option of entering a raffle to receive a \$50 gift certificate. In addition, the researcher agreed to donate \$1 to the NASP minority scholarship fund for each completed survey.

## **Instrumentation**

As part of the study, participants were asked to complete a 36-item survey titled “Perceptions of Bilingual School Psychologists regarding Competency and Future Training Needs” (Appendix A). The first part of the survey asked a series of demographic questions. The participants were asked about their age, race/ethnicity, gender, number of years in professional practice, and highest degree obtained. The participants were also asked about their professional credentials and professional work setting. Lastly, participants were asked if they currently engage in the psycho-educational assessment of

bilingual students. Respondents who indicated they did not conduct assessments of students who are bilingual were not required to complete the survey. The remaining questions included a combination of both Likert scales (e.g., novice, competent, expert) and categorical scales (e.g., yes/no) were employed. As part of the survey, participants were asked about their Spanish language skills, time engaged in bilingual assessment, previous coursework and supervision, competence in working with bilingual students, and feelings about the need for specialized training. All participants were informed their responses would be confidential. Therefore, name and contact information would not be accessible to anyone other than the researcher and only then for the purposes of the drawing.

### **Pilot Survey**

A pilot survey was conducted to determine the ease of reading the questions, length of time needed to complete the questionnaire, and relative appropriateness of the survey questions and format. Approximately five participants for the pilot survey were selected from Spanish-speaking members of the NASP membership. Changes to clarify wording were made to some of the survey items based on the feedback from the pilot participants.

### **Survey Questions**

The following research questions were addressed as part of the survey study and are separated into three primary themes: perceived competence, valuable training experiences, and perceptions of a need for a specific credential.

### *Perceived Competence*

- I. To what degree do bilingual school psychologists perceive themselves to be competent in their training when evaluating ELL students?
- Ia. What (training and regional) factors are most strongly associated with the perceived competence of bilingual school psychologists when working with ELL students?
  - A. To what degree does training influence perceived competence
    - i. Recentness of graduate training
    - ii. Level of training (i.e., specialist, doctoral)
    - iii. Bilingual school psychology graduate coursework
    - iv. Professional development training
    - v. Bilingual supervision
  - B. Are there differences in perceived competence depending on geographic region?

### *Valuable Experiences*

- II. What experiences and/or training do bilingual school psychologists believe to be valuable in developing competence in bilingual assessment?
- Ia. What (training and regional) factors are most strongly associated with bilingual school psychologists' perceptions of valuable training and experiences?

### *Perceptions of Need for Specific Bilingual Credential*

- III. To what degree do bilingual school psychologists believe there is a need in the field for specific credentialing of bilingual school psychologists?
- IIIa. What (training and regional) factors are most strongly associated with the bilingual school psychologists' perceptions of the need for specific credentialing?

## Data Analysis

Given the questions above the following composites and variables were used in the data analysis. See Table 3 below. For a table containing the research questions, variables used, and analyses; refer to Appendix D.

Table 3

### *Independent and Dependent Variables As Defined By Survey (Item Number)*

---

#### Variables

---

##### Dependent

Perception of *Competence* to work with bilingual/Spanish speaking students  
(Items 17-25, 29)

17. Overall competence in bilingual assessment
18. Methods used to conduct bilingual assessments
19. Knowledge of language background when selecting assessment measures
20. Knowledge of language background when administering assessment measures
21. Knowledge of language background when interpreting assessment measures
22. Ability to assess a student's first and second language proficiency
23. Ability to differentiate between problems that are a result of disabilities, versus problems influenced by learning a second language
24. Ability to identify potential biases (e.g., inappropriate norms, validity, linguistic and cultural limitations, etc.) of assessment measures
25. Second language acquisition factors and their relationship to assessment
29. Level of competency in second language acquisition

Perception of *Training Needed* to work with bilingual/Spanish-speaking students  
(Item 31)

31. Extent to which certain experiences and/or training was perceived as valuable in developing the skills needed to work as a bilingual school psychologist.

Perception of *Need for Specific Credential* to work with bilingual/Spanish-speaking students (Item 32 and Item 33)

32. Extent to which respondents would like a credential or certificate indicating they have the training to work with bilingual/Spanish-speaking students.
33. Extent to which respondents believe it is important for the field to have a credential or certificate indicating they have the training to work with bilingual/Spanish-speaking students.

Table 3, Cont.

Variables
<u>Independent</u>
<i>Recentness of graduate training</i>
6. Year highest degree earned
<i>Level of training (Item 5)</i>
5. Highest academic degree earned
<i>Bilingual school psychology graduate coursework (Items 26, 27)</i>
26. Number of courses taken specifically covering bilingual assessment
27. Number of courses taken that address bilingual assessment as part of broader course
<i>Professional development training (Item 28)</i>
28. Professional workshops attended that cover bilingual assessment
<i>Bilingual Supervision (Item 15)</i>
15. Internship supervision by bilingual supervisor

For Question I, descriptive statistics (mean, s.d., frequency counts) were conducted using survey questions 17-25 and 29 as measures of reported competency. Internal consistency of items was evaluated using estimates of Cronbach's alpha. Overall alpha was 0.95, which is very high and indicates strong internal consistency among the ten items. This suggests that respondents who tended to select high scores for one item also tended to select high scores for others.

Using the same measures of competency (items 17-25, 29), a factor analysis was used to determine if any of the competency questions formed one or more scales. Several criteria for the factorability of a scale were considered in determining the appropriateness of a factor analysis. First, Bartlett's Test of sphericity was significant ( $p = <0.001$ ). The diagonals of the anti-image correlation matrix were all over 0.5, supporting the inclusion of each item in the factor analysis. In addition, the communalities were all above 0.3, further confirming that each item shared some common variance with other items. The

first extracted factor had an eigenvalue of 6.84 whereas the next highest extracted factor had an eigenvalue of only 1.16. Finally, a visual inspection of the scree plot clearly supported the interpretation of a unidimensional scale. Given these overall indicators, an overall scale composite score (referred to as “perceived competence”) was calculated and used as the dependent variable in subsequent analyses (see Table 4 for factor loadings).

Table 4

*Loadings from Factor Analysis of Competency Items*

Item	Factor Loadings by Factor	
	Factor 1	Factor 2
17. Overall Competence in bilingual assessment	.858	-.136
18. Methods used to conduct bilingual assessments	.854	-.127
19. Knowledge of language background when selecting assessment measures	.843	-.418
20. Knowledge of language background when administering assessment measures	.824	-.468
21. Knowledge of language background when interpreting assessment measures	.842	-.397
22. Ability to assess a student’s first and second language proficiency	.824	.122
23. Ability to differentiate between problems that are a result of disabilities, versus problems influenced by learning a second language	.790	.401
24. Ability to identify potential biases (e.g., inappropriate norms, validity, linguistic and cultural limitations, etc.) of assessment measures	.776	.354
25. Second language acquisition factors and their relationship to assessment	.842	.404
29. Level of competency in second language acquisition	.814	.325

Question Ia (A) was evaluated with multiple regression using the scale composite and each of the significant variables listed under question I above, as independent variables. The goal was to see to what degree each of those variables makes a difference when the rest of the variables are accounted for. Because this was an exploratory study

the p-values were left at the minimum .05 that allowed the explorations of patterns, which could inform future studies (Rosnow & Rosenthal, 1989). Next, separate bivariate correlations were performed to determine the relationship between competency using the scale composite and each of the following variables:

- i. Recentness of graduate training
- ii. Level of training (i.e., specialist, doctoral)
- iii. Bilingual school psychology graduate coursework
- iv. Professional development training
- v. Bilingual supervision

In order to determine if there were differences in perceived competence depending on region, Question Ia (B) was measured by using the significant variables from the bivariate analysis used in Question Ia (A). Next, ANOVAs were performed to see if those variables differed statistically significantly by region.

Frequency analyses were used for Questions II and III, in order to address what experiences and/or training bilingual school psychologists believe to be valuable in developing competence in bilingual assessment, and to what degree bilingual school psychologists believe that there is a need in the field for a specific credential.

For Question IIa, a repeated measures ANOVA was utilized in determining what training and regional factors were most strongly associated with perceptions of valuable training and experiences. The answers to survey item 31 (perceptions of valuable experiences/training) was used as the dependent variable while the independent variables were those same variables used in question Ia (A).



Finally, Question IIIa was answered by using a univariate ANOVA with survey items 32 and 33 (perceptions of need for specific credential) as the dependent measure and the same independent variables used in Question Ia.

## Chapter IV: Results

### Perceived Competence

In determining to what degree bilingual school psychologists perceive themselves to be competent in their training when evaluating ELL students, descriptive statistics for the sample based on individual questions 17-25 and 29 were used to measure a range of competency areas (see Table 5). All item means were relatively high (mean range = 3.93 to 4.27 based on a 5 point Likert scale). Across all ten items over 90% of respondents rated themselves as “competent” or higher.

Correlation and multiple regression analyses were conducted using the composite perceived competence score (*competency*) as the dependent variable to determine which training and regional factors were most strongly associated with the perceived competence of bilingual school psychologists when evaluating ELL students. Table 6 summarizes the bivariate correlation analysis results. Of the six demographic variables used in the analysis, three were significantly correlated with competency: “year highest degree earned” ( $r(171) = -0.31, p < 0.01$ ), “academic degree” ( $r(178) = 0.28, p < 0.01$ ), and “number of professional workshops attended covering bilingual assessment” ( $r(176) = 0.41, p < 0.01$ ). In contrast, “courses taken during graduate school” and “supervision by a bilingual school psychologist during internship” were not significantly correlated with perceived competency. Of those items significantly correlated with *competency*, a moderate, negative relationship was noted with the *year* the highest degree was earned. This negative relationship indicates that more recent graduates perceived themselves to be less competent.

Table 5

*Means and Frequencies Associated with Competence*

Survey Item	Mean	Survey Response									
		1		2		3		4		5	
		Novice				Competent				Expert	
		N	(%)	N	(%)	N	%	N	%	N	%
17. Overall Competence in bilingual assessment	4.09	1	0.6	0	0.0	46	25.8	65	36.5	66	37.1
18. Methods used to conduct bilingual assessments	4.08	1	0.6	4	2.2	41	23.0	65	36.5	67	37.6
19. Knowledge of language background when selecting assessment measures	4.23	1	0.6	0	0.0	29	16.3	75	42.1	73	41.0
20. Knowledge of language background when administering assessment measures	4.27	1	0.6	0	0.0	25	14.0	75	42.1	77	43.3
21. Knowledge of language background when interpreting assessment measures	4.23	1	0.6	0	0.0	29	16.3	75	42.1	72	41.0
22. Ability to assess a student's first and second language proficiency	4.15	0	0	6	3.4	34	19.2	63	35.6	74	41.8

Table 5, Cont.

*Means and Frequencies Associated with Competence*

Item	Mean	Survey Response									
		1		2		3		4		5	
		N	(%)	N	(%)	N	%	N	%	N	%
23. Ability to differentiate between problems that are a result of disabilities, versus problems influenced by learning a second language	3.95	2	1.1	7	4.0	48	27.1	60	33.9	60	33.9
24. Ability to identify potential biases (e.g., inappropriate norms, validity, linguistic and cultural limitations, etc.) of assessment measures	3.95	1	0.6	8	4.5	47	26.6	63	35.6	58	27.5
25. Second language acquisition factors and their relationship to assessment	3.97	1	0.6	11	6.2	39	22.0	66	37.3	60	33.9
29. Level of competency in second language acquisition	3.93	0	0.0	10	5.7	44	25.0	70	39.8	52	29.5

*Note.* Variables were reported on a 5-point scale where 1= Novice to 5= Expert.

In addition, there was a moderate, positive relationship between competency and number of workshops attended (#28). Finally, there was a low, positive relationship between competence and the highest degree earned, indicating that the higher the degree earned, the greater the perceived competence.

Table 6

*Correlations Between Training Factors and Perceived Competence*

Training Factor	Correlation
6. Year highest degree earned	-.31**
5. Highest academic degree earned	.28**
26. Number of courses taken specifically covering bilingual assessment	< .01
27. Number of courses taken that address bilingual assessment as part of broader course	.01
28. Professional workshops attended that cover bilingual assessment	.41**
15. Internship supervision by bilingual supervisor	-.12

\*\* *Correlation is significant at the 0.01 level (2-tailed).*

A multiple regression was conducted to determine to what degree each of the aforementioned significant variables made a difference when the rest of the variables (i.e., significant variables listed in Table 7) are taken into account. The multiple regression revealed all three variables (recentness of degree earned, number of workshops taken, and highest degree earned) significantly predict perceptions of competence  $F(3,166) = 17.01, p < 0.01$ . The strongest relationship (when controlling for the other two variables) was number of workshops taken.

Table 7

*Multiple Regression Analysis of Training Factors and Perceived Competence*

<i>Variable</i>	<i>B</i>	<i>SE(B)</i>	$\beta$	<i>t</i>	<i>Sig. (p)</i>
Year highest degree earned	-.012	.006	-.151	-2.021	.045
Level of training	.188	.065	.199	2.884	.004
Professional workshops attended	.151	.035	.323	4.274	<.001

\*  $p < .05$ \*\*  $p < .01$ 

In order to determine if any of the training factors interacted with geographic region, three one-way ANOVAs were conducted using the significant variables in Table 6: year highest degree earned, level of training, and professional workshops attended by region; refer to Table 8. Results indicated there was a significant effect of region on highest degree earned at the  $p < .05$  level,  $F(3, 177) = 3.50$ ,  $p = 0.02$ . Post hoc comparisons using the Tukey HSD test indicated the mean score for the Western region ( $M = 1.92$ ,  $SD = 0.84$ ) was significantly lower than the Central region ( $M = 2.46$ ,  $SD = 0.51$ ). These results suggest that individuals from the Central region reported higher education levels than those from the Western Region. There were no other significant differences between the other groups. Thus, region is only related to highest degree held.

Table 8

*Differences by Geographic Region*

Source	df	Mean square	F	p
Highest Degree				
Between-groups	3	1.82	3.50	.017*
Within-groups	177	0.52		
Total	180			
Recentness of Degree				
Between-groups	3	81.27	0.93	.428
Within-groups	170	87.41		
Total	173			
Professional Workshops				
Between-groups	3	4.61	2.15	.095
Within-groups	172	2.14		
Total	175			

\* $p < .05$ , two-tailed.

Given that respondents' level of training differed by region, level of training was used as a covariate in an ANCOVA analysis with the competence composite as the dependent variable. The results of the ANCOVA were not significant,  $F(3, 173) = 2.06$ ,  $p = .108$ , indicating that when degree was controlled for there were no differences in competency by region; refer to Table 9.

Table 9

*ANCOVA Perceived Competency by Region, Degree Earned as Covariate*

Source	SS	df	MS	F	p
Degree earned	8.25	1	8.25	18.49	.000*
Region	2.75	3	0.92	2.06	.108
Error	77.15	173	0.47		
Total	86.75	177			

\* $p < .05$ , two-tailed

## Valuable Experiences

A frequency analysis was performed to determine what experiences and/or training bilingual school psychologists believe to be valuable in developing competence in bilingual assessment (#31). An overview of item ratings is presented in Table 10. For perceived value, all item means were relatively high (mean range = 4.4 to 4.8), suggesting that participants perceived a range of areas to be at least “somewhat valuable.” Items that were rated the most valuable by the majority of respondents included engaging in bilingual assessment at work, direct field experience working with ELL students, and oral language proficiency in Spanish.

Table 10

### *Means and Frequencies for Perceptions of Valuable Experiences/Training*

	Mean	1 Not N (%)	2 N (%)	3 Somewhat N (%)	4 N (%)	5 Very N (%)
Oral language proficiency in Spanish	4.8	0	0	5 (2.9%)	20 (11.4%)	<b>150 (85.7%)</b>
Bilingual Assessment coursework	4.5	0	1 (0.6%)	17 (9.7%)	41 (23.4%)	<b>116 (66.3%)</b>
Bilingual Assessment in your practice	4.8	0	0	2 (1.1%)	25 (14.3%)	<b>148 (84.6%)</b>
Professional development workshops	4.6	0	0	16 (9.1%)	37 (21.1%)	<b>122 (69.7%)</b>
Supervision by a bilingual school psychologist	4.4	0	5 (2.9%)	22 (12.6%)	38 (21.7%)	<b>110 (62.9%)</b>



Table 10, Continued

*Means and Frequencies For Perceptions of Valuable Experiences/Training*

	Mean	1 Not N (%)	2 N (%)	3 Somewhat N (%)	4 N (%)	5 Very N (%)
Direct field experience working with ELL students	4.8	0	2 (1.1%)	7 (4.0%)	14 (8.0%)	<b>152</b> <b>(86.9%)</b>
Reading journal articles/literature on bilingual topics	4.4	0	1 (0.6%)	24 (13.7%)	53 (30.3%)	<b>97</b> <b>(55.4%)</b>

*Note.* Variables were reported on a 5-point scale where 1= Not Valuable to 5= Very Valuable.

In order to determine what training and regional factors were most strongly associated with bilingual school psychologists' perceptions of valuable training and experiences, a repeated measures ANOVA was conducted with the seven responses to Survey Question 31 (identification of valuable training experiences) serving as the within-subjects dimension and the six background variables serving as the between-subjects dimensions. The multivariate test (see Table 11) indicated there were significant main effects for five of the between-subjects variables (region, bilingual supervisor, number of specific bilingual assessment courses, number of assessment courses with some bilingual content, and number of workshops in bilingual assessment). Additionally, there were four interactions between pairs of the between-subjects variables. Univariate tests were conducted (see Tables 12-16) corresponding to these significant multivariate tests, and post-hoc follow-up tests (Tukey) were conducted, where appropriate, based on the univariate results. While the results of the overall multivariate test indicated that there

were significant differences in how valuable the seven experiences were perceived, subsequent results from post-hoc tests revealed that oral language proficiency in Spanish, engaging in bilingual assessment at work, and direct field experience working with ELL students were perceived as most valuable in comparison to the other variables. With respect to Region as an independent variable, an analysis of Region and Degree Earned indicated a trend toward these two variables being related; however, this relationship was not statistically significant.

The results of the univariate tests revealed there were no significant differences in perceptions of valuable experiences by geographic region, by highest degree earned, or by the number of specific bilingual courses taken. Significant univariate effects were found for: (a) the number of professional workshops taken and the perceived value of professional development workshops, and (b) the number of courses taken covering bilingual assessment as part of broader course and the perceived value of both professional workshops taken and reading journal articles. Post hoc analysis using Tukey's HSD criterion indicated that respondents who had taken two or four or more professional development workshops versus those who had taken no workshops found these workshops to be *less* valuable (Appendix E). There were also significant differences between not having taken *any* assessment courses that covered bilingual assessment and having taken one or two courses that did. Those who had taken one or two courses that partially covered bilingual assessment found professional development workshops to be *more* valuable than those who had not taken any such courses (Appendix F). Lastly, there were no significant differences between number of courses taken that

covered bilingual assessment as part of a larger course, and the value placed on reading journal articles (Appendix G).

Table 11

*Multivariate Tests (Wilks' Lambda) of Perceptions of Value of Training Experiences*

Effect	Wilks' Lambda	F	Hypothesis Df	Error Df	P
Region	.341	1.90	18.00	74.02	.03*
Highest Degree Earned	.860	0.34	12.00	52.00	.98
Bilingual Supervisor	.585	3.06	6.00	26.00	.02*
Specific Bilingual Assessment Courses	.242	1.92	24.00	91.91	.01*
Assessment Courses Some Bilingual Content	.205	2.20	24.00	91.91	<.01*
Professional Workshops in Bilingual Assessment	.164	2.60	24.00	91.91	<.01*

*Note.* \* =  $p < .05$ .

DV: Survey Question 31 (identification of valuable training experiences)

To further examine solely which training factors were most strongly associated with bilingual school psychologists' perceptions of valuable training and experiences, a series of Univariate ANOVA's were conducted with the seven responses to Survey Question 31 serving as dependent measures. The findings (see Tables 12 through 16) indicated that three independent variables (number of assessment courses with some bilingual content, having had a bilingual supervisor, and number of workshops in bilingual assessment) resulted in different ratings of value for number of professional development workshops attended.

Table 12

*Univariate Analyses of Ratings of Value of Characteristics or Experiences for Region as Independent Variable*

<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
<u>Oral Language Proficiency in Spanish</u>					
Region	1.39	3	.46	2.33	.08
Degree earned	.17	2	.08	0.42	.66
Region X Degree	.79	5	.16	0.79	.56
Error	32.59	164	.20		
Total	4115.00	175			
<u>Bilingual Assessment Coursework</u>					
Region	1.95	3	.65	1.38	.25
Degree earned	.85	2	.42	0.90	.41
Region X Degree	3.31	5	.66	1.41	.22
Error	77.28	164	.47		
Total	3713.00	175			
<u>Bilingual Assessment In Practice</u>					
Region	.58	3	.19	1.19	.32
Degree earned	.00	2	.00	0.01	.99
Region X Degree	.85	5	.17	1.04	.40
Error	26.84	164	.16		
Total	4118.00	175			
<u>Number of PD Workshops</u>					
Region	.37	3	.12	0.29	.83
Degree earned	.42	2	.21	0.49	.62
Region X Degree	1.99	5	.40	0.93	.47
Error	70.54	164	.43		
Total	3786.00	175			
<u>Bilingual Supervisor</u>					
Region	2.66	3	.89	1.31	.27
Degree earned	.12	2	.06	0.09	.92
Region X Degree	3.37	5	.67	0.99	.42
Error	111.10	164	.68		
Total	3576.00	175			
<u>Field Experience with ELLs</u>					
Region	.62	3	.21	0.67	.57
Degree earned	.55	2	.27	0.89	.41
Region X Degree	2.09	5	.42	1.36	.24
Error	50.43	164	.31		
Total	53.39	175			

Table 12, Cont.

<u>Reading Journal Articles</u>					
Region	3.00	3	1.00	1.80	.15
Degree earned	.80	2	.40	0.73	.49
Region X Degree	1.86	5	.37	0.67	.65
Error	91.14	164	.56		
Total	3493.00	175			

\*p &lt; .05, two-tailed

Table 13

*Univariate Analyses for Number of Workshops as Independent Variable*

<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
<u>Oral Language Proficiency in Spanish</u>					
Number of Workshops	.35	4	.09	.44	.78
Error	34.50	170	.20		
Total	4115.00	175			
<u>Bilingual Assessment Coursework</u>					
Number of Workshops	1.51	4	.38	0.78	.54
Error	81.73	170	.48		
Total	3713.00	175			
<u>Bilingual Assessment In Practice</u>					
Number of Workshops	0.72	4	.18	1.11	.35
Error	27.47	170	.16		
Total	4118.00	175			
<u>PD Workshops</u>					
Number of Workshops	10.20	4	2.55	6.82	.00*
Error	63.59	170	.43		
Total	3786.00	175			
<u>Bilingual Supervisor</u>					
Number of Workshops	4.20	4	1.05	1.58	.18
Error	113.03	170	.67		
Total	3576.00	175			
<u>Field Experience with ELLs</u>					
Number of Workshops	1.53	4	.38	1.25	.29
Error	51.87	170	.31		
Total	4095.00	175			
<u>Reading Journal Articles</u>					
Number of Workshops	2.48	4	.62	1.13	.35
Error	93.71	170	.55		
Total	3493.00	175			

\*p &lt; .05, two-tailed

Table 14

*Univariate Analyses for Number of Courses Covering Bilingual Assessment as Part of  
Broader Course on Assessment as Independent Variable*

<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
<u>Oral Language Proficiency in Spanish</u>					
Courses covering Bil Assessment	1.28	4	0.32	1.62	.17
Error	33.58	170	0.20		
Total	4115.00	175			
<u>Bilingual Assessment Coursework</u>					
Courses covering Bil Assessment	0.74	4	0.19	0.38	.82
Error	82.49	170	0.49		
Total	3713.00	175			
<u>Bilingual Assessment In Practice</u>					
Courses covering Bil Assessment	0.72	4	0.18	1.11	.35
Error	27.47	170	0.16		
Total	4118.00	175			
<u>PD Workshops</u>					
Courses covering Bil Assessment	6.27	4	1.57	3.94	.00*
Error	67.53	170	0.40		
Total	3786.00	175			
<u>Bilingual Supervisor</u>					
Courses covering Bil Assessment	2.03	4	0.51	0.75	.56
Error	115.20	170	0.68		
Total	3576.00	175			
<u>Field Experience with ELLs</u>					
Courses covering Bil Assessment	0.58	4	0.15	0.47	.76
Error	52.81	170	0.31		
Total	4095.00	175			
<u>Reading Journal Articles</u>					
Courses covering Bil Assessment	6.19	4	1.55	2.93	.02*
Error	90.00	170	0.53		
Total	3493.00	175			

\* $p < .05$ , two-tailed

Table 15

*Univariate Analyses for Number of Courses Covering Bilingual Assessment as  
Independent Variable*

<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
<u>Oral Language Proficiency in Spanish</u>					
No of Bilingual Courses	1.02	4	.26	1.28	.28
Error	33.84	170	.20		
Total	4115.00	175			
<u>Bilingual Assessment Coursework</u>					
No of Bilingual Courses	2.89	4	.72	1.53	.20
Error	80.35	170	.47		
Total	3713.00	175			
<u>Bilingual Assessment In Practice</u>					
No of Bilingual Courses	0.31	4	.08	0.46	.76
Error	27.89	170	.16		
Total	4118.00	175			
<u>PD Workshops</u>					
No of Bilingual Courses	1.81	4	.45	1.10	.38
Error	71.99	170	.42		
Total	3786.00	175			
<u>Bilingual Supervisor</u>					
No of Bilingual Courses	1.74	4	.43	0.64	.64
Error	115.50	170	.68		
Total	3576.00	175			
<u>Field Experience with ELLs</u>					
No of Bilingual Courses	0.84	4	.21	0.68	.61
Error	52.60	170	.31		
Total	4095.00	175			
<u>Reading Journal Articles</u>					
No of Bilingual Courses	0.77	4	.19	0.34	.85
Error	95.43	170	.56		
Total	3493.00	175			

\* $p < .05$ , two-tailed

Table 16

*Univariate Analyses for Highest Degree Earned as Independent Variable*

<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
<u>Oral Language Proficiency in Spanish</u>					
Highest Degree Earned	0.03	2	.02	.08	.93
Error	34.83	172	.20		
Total	4115.00	175			
<u>Bilingual Assessment Coursework</u>					
Highest Degree Earned	0.93	2	.46	.97	.38
Error	82.31	172	.48		
Total	3713.00	175			
<u>Bilingual Assessment In Practice</u>					
Highest Degree Earned	0.03	2	.02	.10	.91
Error	28.16	172	.16		
Total	4118.00	175			
<u>PD Workshops</u>					
Highest Degree Earned	0.75	2	.37	.88	.42
Error	73.05	172	.43		
Total	3786.00	175			
<u>Bilingual Supervisor</u>					
Highest Degree Earned	0.12	2	.05	.09	.92
Error	117.11	172	.68		
Total	3576.00	175			
<u>Field Experience with ELLs</u>					
Highest Degree Earned	0.26	2	.13	.41	.66
Error	53.14	172	.31		
Total	4095.00	175			
<u>Reading Journal Articles</u>					
Highest Degree Earned	0.52	2	.26	.46	.63
Error	95.68	172	.56		
Total	3493.00	175			

\* $p < .05$ , two-tailed



Bivariate correlations were then conducted to determine how perceptions of valuable training experiences are most strongly associated with the recentness of degrees earned by bilingual school psychologists. Table 17 summarizes the correlation analysis results. Of the eight variables used in the analysis, only professional development workshops  $r(169) = -.22, p < 0.01$  was significantly correlated with recentness of highest degree earned. These two variables were found to have a low, negative relationship indicating that those who earned their degrees more recently found less value in attending workshops on issues of bilingualism.

Table 17

*Correlation Coefficients Between Recentness of Training and Perceptions of Valuable Experiences.*

Variable	Recentness of Training
Oral language proficiency in Spanish	-.093
Bilingual assessment coursework	-.088
Bilingual assessment in practice	.036
Professional workshops attended that cover bilingual assessment	-.221**
Internship supervision by bilingual supervisor	-.103
Direct field experience working with ELL students	-.002
Reading journal articles on bilingual topics	-.140

\*\* *Correlation is significant at the 0.01 level (2-tailed).*

### **Perceptions of Need for Credential**

Means and frequencies were analyzed to determine to what degree bilingual school psychologists believe it is important for the field as well as themselves professionally to have training leading to a specific credential (see Table 18). The vast majority of respondents indicated they believed a separate certificate or credential was very important for the field as a whole, as well as for them personally. Finally, of those

individuals not living in a state offering a bilingual credential, 90% indicated they would be interested in obtaining such a credential.

Table 18

*Means and Frequencies For Perceptions of Personal Importance for Specific Credential*

	Mean	1 Not N (%)	2 N (%)	3 Somewhat N (%)	4 N (%)	5 Very N (%)
33. Importance of specific credential for field	4.2	5 (2.9%)	9 (5.1%)	24 (13.7%)	41 (23.4%)	<b>96 (54.9%)</b>
32. Importance of specific credential for self	4.1	9 (5.1%)	6 (3.4%)	26 (14.9%)	41 (23.4%)	<b>93 (53.1%)</b>

*Note.* Variables were reported on a 5-point scale where 1= Not Important to 5= Very Important.

Correlation analyses were conducted using the responses to Questions 32 and 33 (importance to survey respondent to have specific bilingual credential and survey respondents' belief of importance of a bilingual credential to the field) to determine which training and regional factors are most strongly associated with the perceived importance of a specific credential or certificate for bilingual school psychologists. Table 19 summarizes the correlation analysis results. Of the seven demographic variables used in the analysis, one was significantly correlated with perceived importance: "number of graduate courses specifically covering bilingual assessment" ( $r(175) = 0.23, p < 0.01$ ). This weak, but positive relationship indicates that those graduates who had taken a higher

number of graduate courses covering bilingual assessment were more likely to perceive obtaining a specific bilingual credential for themselves as important.

Table 19

*Correlations Between Training Factors and Perceived Importance of Specific Credential*

Training Factor	Importance for Field	Importance for Self
Year highest degree earned	-.030	-.040
Highest academic degree earned	-.098	-.182
Supervision by bilingual supervisor	-.071	-.115
Number of courses taken specifically covering bilingual assessment.	.145	.226**
Number of courses taken that address bilingual assessment as part of broader course	-.099	-.014
Professional workshops attended that cover bilingual assessment	.078	.127
State with certification	-.169	-.180

*\*\* Correlation is significant at the 0.01 level (2-tailed).*

Given that respondents' level of training differed by region, level of training was used as a covariate in two ANCOVA analyses with the two perception of importance items as the dependent variables. The results of the ANCOVA using importance of credential to the field as the dependent variable were not significant,  $F(3, 170) = .922$ ,  $p = .431$  (See Table 20), indicating that when degree was controlled for there were no differences by region. A preliminary analysis evaluating the homogeneity-of-regression (slopes) assumption indicated that the relationship between the covariate and the dependent variable did not differ significantly as a function of the independent variable,  $F(3, 167) = 2.110$ ,  $p = .101$ . Similarly, the results of the ANCOVA using importance of credential to self as the dependent variable was not significant,  $F(3, 170) = .815$ ,  $p = .487$  (See Table 20), indicating that when degree was controlled for there were no differences by region. A preliminary analysis evaluating the homogeneity-of-regression (slopes)

assumption indicated that the relationship between the covariate and the dependent variable did not differ significantly as a function of the independent variable,  $F(3, 167) = 1.182, p = .318$ .

Table 20

*ANCOVA Perceived Importance of Credential by Region, Degree Earned as Covariate*

<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
<i>For Field</i>					
Degree earned	1.534	1	1.534	1.392	.240
Region	3.050	3	1.017	0.922	.431
Error	187.399	170	1.102		
Total	3313.000	175			
<i>For Self</i>					
Degree earned	5.379	1	5.379	4.370	.038
Region	3.009	3	1.003	0.815	.487
Error	209.229	170	1.231		
Total	219.50	174			

\* $p < .05$

### **Qualitative Responses**

Individuals were given the opportunity to describe why they would or would not be interested in obtaining a bilingual credential (#36). One hundred thirty three (73%) of the 181 participants chose to answer this optional question. Responses were separated into three broad groups: those interested in a credential, those not interested in a credential, and those responses that were neutral. Interested and not interested responses were coded into sub-themes presented in Table 21.

Table 21

*Interest/Disinterest in Specialized Credential or Certificate*

	N	%
<u>Interested in Credential</u>	106	89.1%
Acknowledge/ show expertise	44	41.5%
Would add additional knowledge	14	13.2%
ID unique set of skills	15	14.1%
Would provide a standard for practice	25	23.5%
Miscellaneous	7	.6%
<u>Not interested in Credential</u>	13	10.9%
No need/interest	8	61.5%
No compensation	2	15.3%
Other/miscellaneous	3	23.2%

As seen in Table 21 the majority of respondents answered favorably to an interest in a specific bilingual credential or certificate. Of those interested in a credential, acknowledgment of their skill set was cited most frequently followed by the belief that such a credential would provide a standard of practice. These interests were followed by those who believed a credential would identify a unique set of skills and additional knowledge. For those who indicated they would not be interested in a specific bilingual credential or certificate, most cited a lack of need (e.g., late in career, state has small number of bilingual students) followed by the belief that a credential would not offer additional compensation.

**Summary of Findings**

In summary, the findings of the analyses used in this study indicated that bilingual school psychologists rated themselves highly across a range of competency areas. Further, there were three variables that significantly correlated with competency: year highest degree earned (negative correlation), academic degree (positive correlation), and number of professional workshops attended covering bilingual assessment (positive

correlation). Conversely, having taking certain coursework or having had a bilingual supervisor did not relate to perceptions of competence. Due to regional differences noted in levels of training, level of training was controlled for when analyzing region. The results of the subsequent analysis indicated there were no differences in the effect of region on perceptions of competence.

When considering bilingual school psychologists' perceptions of valuable training and experiences, the majority of respondents rated engaging in bilingual assessment at work, direct field experience working with ELL students, and oral language proficiency in Spanish as the most valuable experiences in the assessment of bilingual students. Subsequent multivariate and univariate analyses revealed there were no differences in perceived value by region, number of specific bilingual courses taken, or by highest degree earned. More recent graduates found less value in attending workshops on bilingual assessment than did those completing their training at an earlier point.

Finally, the majority of respondents indicated it is important for the field as well as themselves professionally to have training leading to a specific credential. Of those individuals not living in a state offering a bilingual credential, 90% indicated they would be interested in obtaining such a credential. Generally, respondents' views of the value of a specific credential did not vary by region or by training experiences, except those graduates who had taken a higher number of graduate courses covering bilingual assessment were more likely to perceive obtaining a *specific bilingual credential for themselves* as important. Of those interested in a credential, predominant reasons were: (a) acknowledgment of their skill set, (b) credential would provide a standard of practice, (c) and credential would identify a unique set of skills and additional knowledge.

Conversely, those who indicated they would not be interested in a specific bilingual credential or certificate, most cite: (a) a lack of need (e.g., late in career, state has small number of bilingual students) or (b) a credential would not offer additional compensation.

## Chapter V: Discussion

This study sought to examine the perceived competence of Spanish-speaking bilingual school psychologists as service providers to dominant Spanish-speaking students, as well as the factors that influence their perceptions of competence in the area of assessment. The study also explored whether there was a desire amongst respondents in the field for formal certification in bilingual school psychology. Building on previous research, this study examined practices used by bilingual school psychologists when working with ELL students, focusing on NASP members who self-identify as Spanish-English bilingual. Present results reflect the practices of many bilingual practitioners who use those linguistic skills in their practice of assessment. Although several studies have looked at assessment practices of school psychologists with ELL students (e.g., Ochoa et. al., 1997; Ochoa et. al., 2004), only one recent study has specifically examined ELL assessment practices by bilingual school psychologists (O'Bryon & Rogers, 2010). While the same study also addressed some aspects of competency, no study to date has addressed views of interest in a specific certificate or credential that recognizes formal competence in bilingual school psychological services.

### **Bilingual School Psychologists' Perceptions of Competency**

The first research question addressed perceptions of competency. Results indicated that bilingual practitioners on average reported nearly "expert" knowledge of language background when selecting, administering, and interpreting assessment measures, as well as of their ability to assess a student's first and second language proficiency. Although ratings were still high, respondents reported feeling somewhat less knowledgeable when (a) differentiating between problems that are a result of disabilities



and those influenced by learning a second language, (b) identifying potential biases (e.g., inappropriate norms, validity, linguistic and cultural limitations) of assessment measures, (c) identifying second language acquisition factors and their relationship to assessment, and (d) determining level of perceived competency in second language acquisition. These findings are similar to those of O'Bryon and Rogers (2010), who found survey participants indicated above average knowledge ( $M=4.03$ ) regarding second language acquisition issues, and also identified themselves as somewhat comfortable ( $M=3.63$ ) when assessing ELL's language proficiency using a five-point Likert scale. These findings are in direct contrast, however, to the 1997 Ochoa study, which found that the majority (82%) of school psychologists who conducted bilingual assessments reported receiving less than adequate training to conduct bilingual assessments. These stark differences could be attributable to the timeframe of Ochoa's work, suggesting that while few training programs currently existed then (or now, for that matter), the quality of training for bilingual school psychologists has significantly improved in the 15+ years since.

Two variables were significant in their negative correlation with competency: year of highest degree earned and number of professional workshops attended covering bilingual assessment. A third variable, academic degree, was significantly positively correlated with competency. Interesting, attending a training program with a bilingual track versus one without did not significantly correlate with perceptions of competency. However, this may be due to the fact that few school psychology programs, including those with a bilingual track, are aimed specifically toward preparing bilingual practitioners (Ochoa, Rivera, & Ford, 1997; O'Bryon & Rogers, 2010). Similarly, having completed an internship with a bilingual supervisor did not correlate with perceptions of

competency, a perception that may be due to already having had bilingual supervision at a different level of training (e.g., practicum, fieldwork, etc.), or having had bilingual supervision by the university (e.g., professor who taught bilingual coursework). When considering if any training factors interacted with geographic region, the results of ANOVAs revealed a significant effect of region on highest degree earned. However, the results of subsequent analyses indicated that when level of education was controlled for, there were no differences in the effect of region on perceptions of competence.

### **Perceptions of Valuable Training and Experiences**

Engaging in bilingual assessment at work, direct field experience working with ELL students, and oral language proficiency in Spanish were the items rated as very valuable experiences by the majority of survey respondents. Of the three top-rated experiences, oral language proficiency is a skill that is irrespective of the type of program attended (with or without bilingual focus) while the other two items are post-graduate experiences in which all bilingual school psychologists engage in regardless of prior training. Given there are so few programs that specifically train bilingual school psychologists, it is perhaps not surprising that respondents would rely on those immediate skills, which they either already have, or use most often.

The effect of training and regional factors on bilingual school psychologists' perceptions of valuable training and experiences was analyzed. Multivariate and univariate follow-ups (where appropriate) revealed no significant mean differences on the perceived value of these experiences by region, number of specific bilingual courses taken and highest degree earned. Differences were only noted for value of workshops (depending on number of workshops taken) and reading journal articles (depending on

number of courses taken covering bilingual assessment as part of broader course).

Finally, more recent graduates found less value in attending workshops on bilingual assessment than did those who completed their training at an earlier point. A review of the literature did not yield results on the effect of training or regional factors and perceptions of valuable training and experiences in the field of school psychology or in related fields.

### **Perceptions of Need for a Specific Credential**

The final question addressed perceptions of need for a specific credential. The results demonstrated the overwhelming majority (78.3% gave a rating of 4 or 5 on a five-point Likert scale where 5 is very important) of respondents were interested in a specific bilingual certificate or credential indicating they have attained prerequisite skills and experiences. Given most participants did not attend a graduate program specializing in service delivery to bilingual populations, their perception of the lack of such a credential as being negative is striking.

Additional analyses indicated only the *number of graduate courses specifically covering bilingual assessment* positively correlated with perceived importance of a specific bilingual credential. This result indicates those graduates who had taken a higher number of graduate courses covering bilingual assessment were more likely to perceive obtaining a specific bilingual credential for themselves as important. This may be due to the knowledge and skills gained through coursework and the subsequent realization of the need for such training. Finally, there were no differences found by region in subsequent analyses when considering perceptions of the importance of a specific bilingual credential.

These findings are particularly interesting in light of the responses to the optional open-ended question at the end of the survey. The majority of the participants opted to respond to this question and a large number answered positively to an interest in earning a specific bilingual credential or certificate. The primary reasons for their interest were reflected in a belief that a credential would underscore the unique skill set held by bilingual school psychologists as well as provide for a standard of practice. The favorable responses may be the product of the growing ELL population and attendant increase in the need for school psychologists with bilingual skills, as well as the professional desirability of holding such a credential amongst the respondents. Several survey respondents indicated that anyone could call himself or herself bilingual, which furthers the argument for guidelines or standards for training. A review of the literature did not yield results on perceptions of value placed on earning an additional credential or certificate in related fields.

### **Limitations of Research**

One limitation of this research study concerns the sample characteristics. Specifically, all participants were NASP members and not all practicing school psychologists are NASP members. Furthermore, the survey was limited to Spanish-speaking bilingual school psychologists. As such, the practices of these participants may not generalize to the behavior of bilingual school psychologists who speak a language other than Spanish. At the same time, because the Spanish speaking population is the largest ELL population in the U.S. public schools, it seems a good place to start to understand the needs of bilingual school psychologists though at this point generalizations cannot be made to other languages. The survey was additionally confined

only to those Spanish-speaking bilingual school psychologists who had self-identified as such on the NASP Bilingual Directory. Those individuals may perceive themselves to be more competent than individuals who may speak Spanish yet chose not to list themselves in the directory, and may account for the survey respondents' high self-assessments of competence. In addition, the wording of the response alternatives may have resulted in respondents answering questions positively. Specifically, the use of the word competent in the middle position on a 5-point Likert scale may have caused respondents to more positively rate their competencies. Lastly, the study focused solely on those individuals working in the field. A separate study surveying school psychology faculty on their interest and perceived need for a bilingual credential may help to shape future guidelines accepted across states.

The way in which the survey questions were piloted may pose a separate limitation. Although survey items were evaluated prior to use, they were piloted using a Microsoft Word format, wherein respondents typed their answers and comments directly on the document. Sending the pilot survey using the final format (Survey Monkey) may have helped to improve the understanding and provide for consistent measurement of the questions.

Finally, though the 43.7% response rate of the current study was greater than the most recent related studies published about assessment practices used with ELLs (i.e., 37% in O'Bryon & Rogers, 2010; 39% in Bainter and Tolefson, 2003; 33% in McCloskey and Athanasiou, 2000; 29.3% in Ochoa et. al., 2004), increasing the response rate would likely improve the generalizability of the results. For example, the survey was conducted entirely through electronic media. While it is assumed all potential

respondents have access to the Internet (as would have been required to register to the bilingual directory), there may be some who might have been more inclined to answer via paper survey as is purported by some methodologists (e.g., Sax, Gilmartin, & Bryant, 2003; Kwak & Radler, 2002).

### **Implications for the Field**

Overall, these findings further our understanding of the perceived competence of bilingual school psychologists who engage in assessment practices with ELLs. As the number of ELL students in our nation's schools increases, it is of growing importance to train qualified personnel to serve this unique population. Similarly, the overrepresentation of ELL students in special education, particularly in districts with few ELL children, underscores the importance of well-trained bilingual school psychology professionals across the country. The present emphasis on ELL students has translated into multiple efforts to address the needs and interests of current and future bilingual school psychologists. For example, the 2010 *Directory of Bilingual School Psychologists* available on the NASP website, the recent development of its Multicultural and Bilingual School Psychology Training Programs page, which provides a link to programs who have self-identified as having a bilingual track or focus, the NASP Bilingual School Psychology Interest Group, and the planned development of a NASP position statement on bilingual school psychology all underscore the increased focus on the topic within the profession.

In this study, oral language proficiency was rated as the most valuable item in developing the requisite skills to work as a bilingual school psychologist, underscoring the need for continued recruitment of those proficient in spoken Spanish. While graduate

programs may actively recruit Spanish-speaking students, additional outreach efforts at the national level may prove helpful. This could include media campaigns, social network sites, flyers, or recruitment videos targeting college students and others who may have an impact on the field. Similarly, outreach efforts targeting non-native speakers could help increase the number of future bilingual school psychologists. Individuals who have majored or minored in Spanish, studied abroad, or have significant immersion experience in Spanish-speaking countries may be able to increase their skills through targeted coursework and supervision. Finally, the recruitment and retention of Spanish-speaking school psychologists as faculty members would be key to the future success of currently existing and future bilingual competence programs.

Direct field experience as well as engaging in bilingual assessment at work were also rated as valuable skills in working with ELL students. While survey questions regarding these two activities focused on the work of a practitioner, the importance of their implications on training programs cannot be understated. Opportunities for graduate students to assess ELL children and work with linguistically diverse students are already subsumed in programs that have a bilingual track, and should further be strongly considered for inclusion by programs intending to add a bilingual focus and in any future position statement on bilingual school psychologist training standards. Similarly, the number of professional workshops attended that cover bilingual assessment was positively related to competence. This implies there are great opportunities for local, national, and state associations to seek out presenters knowledgeable on the topic. Moreover, present findings reflect that bilingual school psychologists are interested in earning a specific credential or other designation that highlights bilingual competence.

The two states (New York and Illinois) that already have such credentials/certificates have very similar requirements, which could be used as a model for training programs, credentialing bodies, and state and national associations. State and national associations could, in turn, prove useful in developing a position statement highlighting the need for the appropriate training and competencies needed by bilingual school psychologists.

### **Implication for Future Research**

Although the present study provided valuable information about bilingual school psychologists' perceptions of competency and interest in a specific credential, there is room for additional research. With such high competency ratings given by respondents and the potential introduction of bias, it may be useful to conduct this study differently using defined behavioral indices (e.g., approaches assessment through hypothesis generated perspective, uses of multiple sources of information to determine language dominance, and choice of assessment measures that take into account the student's language dominance and also answers referral questions, etc.). Definition of what constitutes competent bilingual practices could be answered using behavioral observation methods by an expert observer. The findings of such work could further delineate areas of competence and skills that need additional support.



## Appendix A

### Survey

- 1) Do you currently conduct and/or participate in the assessment of children who are dominant Spanish-speakers?

a. ☐ Yes  
b. ☐ No

\* If you do not currently conduct and/or participate in the assessment of children who are dominant Spanish-speakers you do not need to complete the survey portion of this study. Please submit your answers to the demographic questionnaire. Thank you for your participation. You are still eligible for the drawing, and by completing this portion of the questionnaire I will donate \$1.00 to the NASP Minority Fund.

- 2) What is your gender?

a. ☐ Male  
b. ☐ Female

- 3) Are you of Hispanic, Latino, or Spanish origin?

a. ☐ Yes  
b. ☐ No

- 4) How would you describe your race? (Check those categories that apply)

a. <input type="checkbox"/> American Indian or Alaskan Native	h. <input type="checkbox"/> Korean
b. <input type="checkbox"/> Asian Indian	i. <input type="checkbox"/> Native Hawaiian
c. <input type="checkbox"/> Black or African American	j. <input type="checkbox"/> Other Asian
d. <input type="checkbox"/> Chinese	k. <input type="checkbox"/> Other Pacific Islander
e. <input type="checkbox"/> Filipino	l. <input type="checkbox"/> Samoan
f. <input type="checkbox"/> Guamanian or Chamorro	m. <input type="checkbox"/> Vietnamese
g. <input type="checkbox"/> Japanese	n. <input type="checkbox"/> White
	o. <input type="checkbox"/> Other

- 5) What is the highest academic degree you have acquired?

a. ☐ Masters (e.g., MA, MS, M.Ed.)  
b. ☐ Specialist Degree (e.g. Ed.S. CAGS/AGS, or specialist level equivalent)  
c. ☐ Doctorate (e.g., Ed.D., Ph.D., Psy.D.)

- 6) In what year, did you obtain your highest degree or certificate as checked above?

\_\_\_\_\_

- 7) What certification/licensure do you hold? (check all that apply)

a. ☐ State/Dept of Education Credential  
b. ☐ Nationally Certified School Psychologist (NCSP)  
c. ☐ Other\_\_\_\_\_

8) How many years have you been licensed/credentialed/certificated to work as a school psychologist? \_\_\_\_\_

9) At what level(s) do you practice? (**Check all that apply**)

- a. ☐ Pre-school
- b. ☐ Elementary
- c. ☐ Middle or Junior High
- d. ☐ Senior High
- e. ☐ Faculty Member/University Trainer
- f. ☐ Private Practice
- g. ☐ Other (*please specify*) \_\_\_\_\_

10) In what state do you currently work? \_\_\_\_\_

11) In what state did you complete your graduate degree in school psychology? \_\_\_\_\_

12) Please indicate your degree of proficiency in Spanish

	Novice		Competent		Fluent
Speaking	1	2	3	4	5
Listening	1	2	3	4	5
Reading	1	2	3	4	5
Writing	1	2	3	4	5

13) How did you gain your Spanish language skills? (check all that apply)

- a. ☐ Grew up in Spanish speaking household
- b. ☐ Took courses in high school
- c. ☐ Took courses in college/graduate school
- d. ☐ Went on cultural/language immersions
- e. ☐ Other \_\_\_\_\_

14) Did you graduate from a program that offered a certification or specialization in bilingual school psychology?

- a. ☐ Yes
- b. ☐ No

15) Did a bilingual supervisor supervise you during your internship?

- a. ☐ Yes
- b. ☐ No

16) What percentage of time spent on assessment do you devote to the assessment of bilingual students?

- a. 0-25%
- b. 26-50%
- c. 51-75%

d. 76-100%

Questions 17-25, and 29 will ask you to rate your competence in a range of areas using the terms *Novice*, *Competent*, and *Expert*. The aforementioned terms are reflective of terminology used throughout the field of school psychology and can be found in NASP position statements, standards, and the current Blueprint for Training and Practice. The terms are defined below as they relate to the field of school psychology:

**Novice:** A beginner, a person in the coursework phase of their training to acquire this skill.

**Competent:** Having sufficient skill, knowledge, and experience. Can be a recent graduate but has taken coursework and has had supervision.

**Expert:** Experienced, a high degree of skill, typically takes five to ten years of applied experience.

17) Please rate your overall competency in the area of bilingual assessment.

Novice		Competent		Expert
1	2	3	4	5

18) How would you rate your competency regarding methods/instruments used to conduct bilingual assessments?

Novice		Competent		Expert
1	2	3	4	5

*For questions 19-21, knowledge of language background is your understanding of the students' home language and/or primary language.*

19) How would you rate your competency regarding knowledge of language background (i.e., Spanish) when selecting assessment measures?

Novice		Competent		Expert
1	2	3	4	5

20) How would you rate your competency regarding knowledge of language background (i.e., Spanish) when administering assessment measures?

Novice		Competent		Expert
1	2	3	4	5

21) How would you rate your competency regarding knowledge of language background (i.e., Spanish) when interpreting assessment measures?

Novice		Competent		Expert
1	2	3	4	5

- 22) How would you rate your competency regarding your ability to assess a student's first and second language proficiency?

Novice		Competent		Expert
1	2	3	4	5

- 23) How would you rate your competency regarding your ability to differentiate between problems that are a result of disabilities, versus problems influenced by learning a second language?

Novice		Competent		Expert
1	2	3	4	5

- 24) How would you rate your competency regarding your ability to identify potential biases (e.g., inappropriate norms, validity, linguistic and cultural limitations, etc.) of assessment measures?

Novice		Competent		Expert
1	2	3	4	5

- 25) How would you rate your competency on the topic of second language acquisition factors and their relationship to assessment?

Novice		Competent		Expert
1	2	3	4	5

- 26) In your graduate program, how many courses did you take specifically titled or specifically covering bilingual assessment?

- e. ☐ 0
- f. ☐ 1
- g. ☐ 2
- h. ☐ 3
- i. ☐ 4 or more

- 27) In your graduate program, how many courses did you take that covered bilingual assessment as part of a broader graduate course in assessment, but were not specifically focused on bilingual assessment?

- a. ☐ 0
- b. ☐ 1
- c. ☐ 2
- d. ☐ 3
- e. ☐ 4 or more

28) Since completing your highest degree/certificate, how many professional workshops have you attended that covers bilingual assessment?

- a. ☐ 0
- b. ☐ 1
- c. ☐ 2
- d. ☐ 3
- e. ☐ 4 or more

29) Please rate your *overall* level of competency on the topic of second language acquisition.

Novice		Competent		Expert
1	2	3	4	5

30) How did you acquire these skills (knowledge of second language acquisition issues)? Check all that apply.

- a. ☐ As part of a graduate course
- b. ☐ A graduate course (for credit on your transcript)
- c. ☐ Practicum/fieldwork/internship
- d. ☐ Independent reading
- e. ☐ Professional workshop

31) To what degree do you believe the following experiences and/or training are valuable in developing the skills needed to work as a bilingual school psychologist

	Not Valuable		Somewhat Valuable		Very Valuable
Oral language proficiency in Spanish	1	2	3	4	5
Bilingual Assessment coursework	1	2	3	4	5
Bilingual Assessment in your practice	1	2	3	4	5
Professional development workshops	1	2	3	4	5
Supervision by a bilingual school psychologist	1	2	3	4	5
Direct field experience working with ELL	1	2	3	4	5

students					
Reading journal articles/literature on bilingual topics	1	2	3	4	5
Other (fill-in)	1	2	3	4	5

- 32) How important is it (for you) to have specific training, leading to a state/department of education credential or certificate indicating that you have met state requirements, which represent competency as a bilingual school psychologist?

Not Important		Somewhat Important		Very Important
1	2	3	4	5

- 33) How important do you think it is for state departments of education to grant a credential or certificate recognizing that an individual has had specific training, which meets state requirements of fully trained bilingual school psychologists?

Not Important		Somewhat Important		Very Important
1	2	3	4	5

- 34) If you live in a state that offers a bilingual credential or certificate, do you have such a certificate?

- a. ☐ Yes
- b. ☐ No
- c. ☐ N/A

- 35) If your state *doesn't* offer a bilingual credential or certificate, would you be interested in obtaining a bilingual credential?

- a. ☐ Yes
- b. ☐ No
- c. ☐ N/A

- 36) Why or why not? [Question allows for a brief constructed response.]

## Appendix B

### *E-mail sent to prospective participants*

Dear Bilingual School Psychologist:

You are invited to participate in a study of Spanish/English speaking bilingual school psychology practitioners. The survey will examine participants' perceptions of assessment competence and interest in bilingual school psychology training and standards. You are being invited to participate in this study because you are associated with the field of school psychology, and have identified yourself as a Spanish-speaking bilingual school psychologist in the National Association of School Psychologist (NASP) on-line bilingual directory.

Participation in this study will entail completion of a short demographic questionnaire and a survey. The entire questionnaire and survey will take approximately 15 minutes. Involvement in this project is completely voluntary. All participant responses will be kept confidential. The researcher will not obtain names or any information that might directly relate the participant to the subject ID number or identify you as a participant. This study is not designed to provide you with any direct benefits. However, your participation in this study will contribute to a better understanding of the training and supervision needs of bilingual school psychologists. There are no anticipated risks to you as a participant. You are free to withdraw your consent to participate and may discontinue your participation in the study at any time.

If you participate, you may also choose to be entered into a raffle to receive a \$50 gift certificate. In addition, the researcher will donate \$1 to the NASP minority scholarship fund for each completed survey. Odds of winning will be dependent on total number of completed surveys, but is estimated at approximately 1 in 400.

This study is being conducted by Anna Peña, a doctoral candidate in school psychology, under the supervision of Dr. William Strein, Director of the School Psychology Program at the University of Maryland, College Park, in partnership with NASP. If you have any questions about the research study itself, please contact Anna Peña or William Strein. This research has been approved by the Institutional Review Board of the University of Maryland, College Park. If you have questions about your rights as a research participant, please contact the Institutional Review Board Office at the University of Maryland, College Park, by e-mail or by telephone at 301-405-0678.

To begin the survey, click [here](#).

Thank you for your attention to this important survey activity.

## Appendix C

Dear Bilingual School Psychologist:

Last week, I sent you an e-mail to invite your participation in a brief survey study titled *Perceptions of Bilingual School Psychologists Regarding Assessment Competency and Future Training Needs*. If you have already completed the survey, please accept my thanks. If not, will you please take a few minutes to do so today? The entire questionnaire and survey will take approximately 15 minutes. Involvement in this project is completely voluntary, and all participant responses will be kept confidential.

If you participate, you may choose to be entered into a raffle to receive a \$50 gift certificate. In addition, the researcher will donate \$1 to the NASP Minority Scholarship Program for each completed survey. Odds of winning the raffle will be dependent on total number of completed surveys, but are estimated at approximately 1 in 400.

This study is being conducted by Anna Peña, a doctoral candidate in school psychology, under the supervision of Dr. William Strein, Director of the School Psychology Program at the University of Maryland, College Park, in partnership with NASP. If you have any questions about the research study itself, please contact Anna Peña or William Strein. This research has been approved by the Institutional Review Board of the University of Maryland, College Park. If you have questions about your rights as a research participant, please contact the Institutional Review Board Office at the University of Maryland, College Park, by e-mail or by telephone at 301-405-0678.

To begin the survey, [click here](#).

Thank you for your attention to this important survey activity.



## Appendix D

### *Survey Items, Independent/Dependent Variables, and Analyses*

	Research Question	Dependent Variable(s)	Independent Variable(s)	Analysis
I.	<p>To what degree do bilingual school psychologists perceive themselves to be competent in their training when evaluating ELL students?</p> <p>What (training and regional) factors are most strongly associated with the perceived competence of bilingual school psychologists when working with ELL students?</p>	Survey Items 17-25, 29	None, RQ is descriptive only.	<p>Descriptive statistics using survey questions 17-25, 29 as measures of reported competency.</p> <p>Factor analysis using survey questions 17-25, 29 to form overall scale of competency used as DV in subsequent analyses.</p>
Ia.	<p>What (training and regional) factors are most strongly associated with the perceived competence of bilingual school psychologists when working with ELL students?</p> <p>A) To what degree does training influence perceived competence?</p> <p>Item 6: Recentness of graduate training  Item 5: Level of training (i.e., specialist, doctoral)  Items 26 &amp; 27: Bilingual school psychology graduate coursework  Item 28: Professional development training  Item 15: Bilingual supervision</p>	Survey Items 17-25, 29	Survey Items 6, 5, 26, 27, 28, 15	<p>Multiple regression analysis performed with the scale composite and each of the significant variables listed under question I above, as independent variables.</p> <p>Separate bivariate correlations performed to determine the relationship between competency using the scale composite and each of the independent variables listed.</p>
	Research Question	Dependent Variable(s)	Independent Variable(s)	Analysis

	B) Are there differences in perceived competence depending on geographic region?		Regions	Significant variables from the bivariate analysis used in question Ia. Next, ANOVA's were performed to see if those variables differed statistically by region.
II.	What experiences and/or training do bilingual school psychologists believe to be valuable in developing competence in bilingual assessment?	Item 31	None, RQ is descriptive only.	Frequency analysis
Ila.	What (training and regional) factors are most strongly associated with bilingual school psychologists' perceptions of valuable training and experiences?	Item 31	Same as RQ Ia	ANOVA using significant variables (ie., item 6, item 5, item 28)  Post hoc comparisons  ANCOVA
III.	To what degree do bilingual school psychologists believe that there is a need in the field for specific credentialing of bilingual school psychologists?	Item 32	None, RQ is descriptive only.	Frequency analysis
IIIa.	What (training and regional) factors are most strongly associated with the bi-lingual school psychologists' perceptions of the need for specific credentialing?	Items 32, 33	Same as RQ Ia, and Item 34	Univariate ANOVA  Separate bivariate correlations performed to determine the relationship between competency and survey Items 6, 5, 26, 27, 28, 15

## Appendix E

*Tukey HSD Comparison as Number of Professional Development Workshops Attended as the Independent Variable*

(I) No of Workshops	(J) No of Workshops	Mean Diff (I-J)	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
0	1	-.57	.209	-1.148	.005
	2	-.63*	.192	-1.160	-.103
	3	-.50	.219	-1.105	.105
	4 or more	-.74*	.143	-1.135	-.346
1	0	.57	.209	-.005	1.148
	2	-.06	.215	-.654	.534
	3	.07	.241	-.592	.735
	4 or more	-.17	.174	-.648	.310
2	0	.63*	.192	.103	1.160
	1	.06	.215	-.534	.654
	3	-.13	.226	-.490	.753
	4 or more	-.11	.152	-.529	.310
3	0	.50	.219	-.105	1.105
	1	-.07	.241	-.735	.592
	2	-.13	.226	-.753	.490
	4 or more	-.24	.186	-.754	.272
4 or more	0	.74*	-.143	.346	1.135
	1	.17	-.174	-.310	.648
	2	.11	-.152	-.310	.529
	3	.24	.186	-.272	.754

\*  $p < 0.05$

## Appendix F

### *Tukey HSD Comparison for Courses Partially Covering Bilingual Assessment as the Independent Variable*

(I) No of Workshops	(J) No of Workshops	Mean Diff (I-J)	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
0	1	.38*	.127	.031	.734
	2	.46*	.141	.067	.846
	3	.07	.157	-.362	.502
	4 or more	.12	.167	-.340	.580
1	0	-.38*	.127	-.734	-.031
	2	.07	.143	-.319	.467
	3	-.31	.158	-.747	.122
	4 or more	-.26	.168	-.725	.200
2	0	-.46*	.141	-.846	-.067
	1	-.07	.143	-.467	.319
	3	-.39	.169	-.853	.080
	4 or more	-.34	.179	-.829	.156
3	0	-.07	.157	-.502	.362
	1	.31	.158	-.122	.747
	2	.39	.169	-.080	.853
	4 or more	.05	.191	-.476	.576
4 or more	0	-.12	.167	-.580	.340
	1	.26	.168	-.200	.725
	2	.34	.179	-.156	.829
	3	-.05	.191	-.576	.476

\* p < 0.05

## Appendix G

Tukey HSD Comparison for Reading journal articles/literature on bilingual topics as the  
Independent Variable

(I) No of Courses	(J) No of Courses	Mean Diff (I-J)	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
0	1	.23	.147	-.180	.630
	2	.45	.163	-.001	.898
	3	.39	.181	-.107	.890
	4 or more	-.05	.193	-.581	.481
1	0	-.23	.147	-.630	.180
	2	.22	.165	-.230	.677
	3	.17	.182	-.335	.668
	4 or more	-.28	.194	-.809	.259
2	0	-.45	.163	-.898	.002
	1	-.22	.165	-.677	.230
	3	-.06	.195	-.595	.481
	4 or more	-.50	.206	-1.067	.070
3	0	-.39	.181	-.890	.107
	1	-.17	.182	-.668	.335
	2	.06	.195	-.481	.595
	4 or more	-.44	.220	-1.049	.166
4 or more	0	.05	.193	-.481	.581
	1	.28	.194	-.259	.809
	2	.50	.206	-.070	1.067
	3	.44	.220	-.166	1.491

\*  $p < 0.05$

## References

- American Psychological Association (2002). Ethical principles of psychologists and code of conduct. Retrieved from <http://www.apa.org/ethics/code2002.html> on August 7, 2009.
- American Psychological Association (2002). Guidelines on multicultural education, training, research, practice, and organizational change for psychologists. Retrieved from <http://www.apa.org/pi/oema/resources/policy/multicultural-guidelines.aspx> on August 21, 2009.
- Aspel, A. D., Willis, W. G., & Faust, D. (1998). School psychologists' diagnostic decision-making processes: Objective-subjective discrepancies. *Journal of School Psychology, 36*, 137- 149.
- Bainter, T. R., & Tollefson, N. (2003). Intellectual assessment of language minority students: What do school psychologists believe are acceptable practices? *Psychology in the Schools, 40*, 599-603.
- Batalova, J., and McHugh, M. (2010). *Top Languages Spoken by English Language Learners Nationally and by State*. Washington, DC: Migration Policy Institute.
- Chapman, C., Laird, J., and KewalRamani, A. (2010). Trends in high school dropout and completion rates in the United States: 1972–2008 (NCES 2011-012). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC. Retrieved from <http://nces.ed.gov/pubsearch>.
- Curtis, M. J., Grier, J. B., Abshier, D. W., Sutton, N. T., & Hunley, S. A. (2002). School psychology: Turning the corner into the twenty-first century. *Communiqué, 30* (8), 1-5.

- Curtis, M.J., Hunley, S.A., Walker, K.J., & Baker, A.C. (1999). Demographic characteristics and professional practices in school psychology. *School Psychology Review, 28*(1), 104 -116.
- Fagan, T. K. (2002). Trends in the history of school psychology in the United States. In A. Thomas and J. Grimes (Eds.), *Best practices in school psychology IV* (p. 209-222).
- Fagan, T. K. & Wise, P. S. (2007). *School psychology: Past, present, and future, (3rd ed.)*. Bethesda, MD: National Association of School Psychologists.
- Figueroa, R.A., & Artiles, A.J. (1999). Disproportionate minority placement in special education programs: Old problem, new explanations. In A. Tashakkori & S. H. Ochoa (Eds.), *Education of Hispanics in the U.S.: Politics, policies, and outcomes* (pp. 93-117). New York: AMS Press, Inc.
- Figueroa, R. A., Sandoval, J., & Merino, B. (1984). School psychology and limited-English- proficient (LEP) children: New competencies. *Journal of School Psychology, 22*, 131- 143.
- Flanagan, D.P., & Ortiz, S.O. (2003). Best practices in intellectual assessment: Future directions. In A. Thomas, & J. Grimes (Eds.), *Best practices in school psychology IV* (pp. 1351-1372). Bethesda, MD: National Association of School Psychologists.
- Harvey, V.S., & Struzziero, J.A. (2008). *Professional development and supervision of school psychologists: From intern to expert*. Thousand Oaks, CA: Corwin Press.

- Hemphill, F.C., and Vanneman, A. (2011). *Achievement gaps: How Hispanic and White students in public schools perform in mathematics and reading on the national assessment of educational progress* (NCES 2011-459). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.
- Hunley, S. A., Curtis, M. J., & Batsche, G. M. (2002). Best practices in supervision of school psychological services. In A. Thomas & J. Grimes (Eds.) *Best practices in school psychology* (pp. 103-114). Bethesda, MD: National Association of School Psychologists.
- Joint Committee on Standards for Educational and Psychological Testing (1999). *Standards for educational and psychological testing*. Washington, DC: American Educational Research Association.
- Keitel, M. A., Kopala, M., & Adamson, W.S. (1996). Ethical issues in multicultural assessment. In L.A. Suzuki, P. J. Meller & J. G. Ponterotto (Eds.). *Handbook of multicultural assessment: Clinical, psychological and educational applications* (pp. 28-48). San Francisco: Josey-Bass.
- Keller-Allen, C. (2006). English language learners with disabilities: Identification and other state policies and issues. Alexandria, VA: Project Forum, National Association of State Directors of Special Education.
- Kwak, N., & Radler, B. (2002). A comparison between mail and web surveys: Response pattern, respondent profile, and data quality. *Journal of Official Statistics*, 18(2), 257-274.



- Lopez, E.C. (1995). Best practices in working with bilingual children. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology III* (3rd ed., pp. 1111–1121). Washington, DC: National Association of School Psychologists.
- Lopez, E. C. (2009). New bilingual school psychology interest group creates forum for communication and exploration. *NASP Communiqué*, 37 (5).
- Lopez, E. C., & Rogers, M.R. (2007). Multicultural competencies and training in school psychology: Issues, approaches, and future directions. In G. B. Esquivel, E. C. Lopez, & S. Nahari (Eds.). *Handbook of multicultural school psychology: An interdisciplinary perspective*. NJ: Erlbaum.
- McCloskey D., & Athanasiou, M. (2000). Assessment and intervention practices with second-language learning among school psychologists. *Psychology in the Schools*, 37 (3), 209-225.
- National Association of School Psychologists (2008). Fluency in and use of languages other than English among NASP members. Unpublished data from the 2004-05 NASP Membership Survey.
- National Association of School Psychologists (2010a). *Standards for graduate preparation of school psychologists*. Bethesda, MD: Author.
- National Association of School Psychologists. (2010c). *The principles for professional ethics*. Bethesda, MD: Author.
- National Center for Education Statistics (2007). *Public elementary and secondary school student enrollment, high school completions, and staff from the common core of data: School year 2005–06*. Washington, DC: Author. Retrieved March 24, 2010 from [http://nces.ed.gov/pubs2007/pesenroll06/tables/table\\_1.asp](http://nces.ed.gov/pubs2007/pesenroll06/tables/table_1.asp)

National Clearinghouse for English Language Acquisition. (2011). [The Growing Numbers of Limited English Proficient Students](#) Washington, DC: Author.

Retrieved March 10, 2012 from

[www.ncela.gwu.edu/files/uploads/9/growingLEP\\_0809.pdf](http://www.ncela.gwu.edu/files/uploads/9/growingLEP_0809.pdf)

National Clearinghouse for English Language Acquisition. (2011). *Number of Limited English Proficient Students Reported by States in the Consolidated State Performance Reports, School Year 2008–09*. Washington, DC: Author. Retrieved March 10, 2012 from

[http://www.ncela.gwu.edu/files/uploads/30/CSPR\\_2009\\_LEPtotal.pdf](http://www.ncela.gwu.edu/files/uploads/30/CSPR_2009_LEPtotal.pdf)

National Education Association. (2007). Truth in labeling: Disproportionality in special education. Washington D.C. Retrieved August 2009 from

[www.nea.org/assets/docs/EW-TruthInLabeling.pdf](http://www.nea.org/assets/docs/EW-TruthInLabeling.pdf)

Nelson, J.M., & Machek, G.R. (2007). A survey of training, practice, and competence in reading assessment and intervention. *School Psychology Review*, 36, 311-327.

O'Bryon E.C., Rogers, M. R., (2010). Bilingual school psychologists' assessment practices with English language learners. *Psychology in the Schools*, 47, 1018-1034.

Ochoa, S. H., Riccio, C., Jimenez, S., Garcia de Alba, R., & Sines, M. (2004).

Psychological assessment of English language learners and/or bilingual students:

An investigation of school psychologists' current practices. *Journal of*

*Psychoeducational Assessment*, 22, 185-208.

- Ochoa, S. H., Powell, M. P., & Robles-Piña, R. (1996). School psychologists' assessment practices with bilingual and limited-English proficient students. *Journal of Psychoeducational Assessment, 14*, 250-275.
- Ochoa, S.H., Rivera, B., & Ford, L. (1997). An investigation of school psychology training pertaining to bilingual psycho-educational assessment of primarily Hispanic students: Twenty five years after *Diana v. California*. *Journal of School Psychology, 35*, 329-349.
- Olmedo, E. (1981). Testing linguistic minorities. *American Psychologist, 36*, 1078-1085.
- Ortiz, S. O., & Dynda, A. M. (2005). *The use of intelligence tests with culturally and linguistically diverse populations*. In D. P. Flanagan & P. L. Harrison (Eds.), *Contemporary intellectual assessment, 2nd Edition* (pp. 545-556). New York: Guilford Press.
- Ortiz, S. O. & Ochoa, S. H. (2005): Cognitive assessment of culturally and linguistically diverse individuals: an integrated approach. In R. L. Rhodes, S. H., Ochoa, & S. O. Ortiz (Eds.), *Assessing culturally and linguistically diverse students: A practical guide* (pp. 168-201). New York: The Guilford Press.
- Paniagua, F. A. (1998). *Assessing and treating culturally diverse clients* (2nd ed.). Thousand Oaks, CA: Sage.
- Papoutsis Kritikos, E. (2003). Speech-language pathologists' beliefs about language assessment of bilingual/bicultural individuals. *American Journal of Speech-Language Pathology, 12*, 73-91.

- Paredes Scribner, A. (2002). Best assessment and intervention practices with second language learners. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology IV* (pp. 1485-1499). Bethesda, MD: National Association of School Psychologists.
- Ramage, J.C. (1979). National survey of school psychologists: Update. *School Psychology Digest*, 8, 153-61.
- Rampey, B.D., Dion, G.S., and Donahue, P.L. (2009). *NAEP 2008 Trends in Academic Progress* (NCES 2009-479). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Washington, D.C.
- Reschly, D. J. (2000). The present and future status of school psychology in the united states. *School Psychology Review* 29, 507-522.
- Reschly, D. J., & Wilson, M. S. (1995). School psychology practitioners and faculty: 1989 to 1991-92 trends in demographics, roles, satisfaction, and system reform. *School Psychology Review*, 24(1), 62-80.
- Rhodes, R.L., Ochoa, S.H., & Ortiz, S. (2005). *Assessing culturally and linguistically diverse students: A practical guide*. New York, NY: Guilford Press.
- Rogers, M.R., & Lopez, E. C. (2002). Identifying critical cross-cultural school psychology competencies. *Journal of School Psychology*, 40, 115-141.
- Roseberry-McKibbin, C. A., & Eicholtz, G. E. (1994). Serving children with limited English proficiency in the schools: A national survey. *Language, Speech, and Hearing Services in Schools*, 25, 156-164.

- Rosenfield, S., & Esquivel, G. (1985). Educating school psychologists to work with bilingual/bicultural populations. *Professional Psychology: Research and Practice*, 16, 199–208.
- Rosnow, R.L. & Rosenthal, R. (1989). Statistical procedures and the justification of knowledge in psychological science. *American Psychologist*, 44, 1276-1284.
- Sax, L., Gilmartin, S., and Bryant, A. (2003). Assessing response rates and non-response bias in web and paper surveys. *Research in Higher Education*, 44(4), 409 – 432.
- Smith, D. K. (1984). Practicing school psychologists: Their characteristics, activities, and populations served. *Professional Psychology: Research and Practice*, 15, 798–810.
- Sotelo-Dynega, M. (2009). First official meeting of the bilingual school psychology interest group. *NASP Communiqué*, 37 (8).
- Sotelo-Dynega, M., Geddes, L. Amanda, L. & Teague, J. (2009). What is a bilingual school psychologist? A national survey of the credentialing bodies of school psychologists. Presentation at the national convention of the National Association for School Psychologists, Boston, MA.
- U.S. Census Bureau. (2010). United States Census 2010. Retrieved from [www.census.gov/schools/pdf/2010form\\_info.pdf](http://www.census.gov/schools/pdf/2010form_info.pdf).
- U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Public Elementary/Secondary School Universe Survey", 2009-10, Version 1a; and "Local Education Agency Universe Survey", 2009-10, Version 1a; and "State Nonfiscal Survey of Public Elementary/Secondary

Education", 2009-10, Version 1a. Retrieved on March 10, 2012 from

<http://nces.ed.gov/programs/stateprofiles/>

U.S. Department of Education, Office of Special Education and Rehabilitative Services,  
Office of Special Education Programs, Percentage of children ages 3 to 5 and ages  
6 to 21 served under the Individuals with Disabilities Education Act (IDEA), by  
race/ethnicity: 1998–2007. Retrieved March 18, 2012 from

[http://nces.ed.gov/pubs2010/2010015/tables/table\\_8\\_1a.asp](http://nces.ed.gov/pubs2010/2010015/tables/table_8_1a.asp)

Valdés, G., & Figueroa, R. A. (1994). *Bilingualism and testing: a special case of bias*.

Norwood, NJ: Ablex.

Vasquez-Nuttall, E. (1987). Survey of current practices in the psychological assessment  
of limited-English proficiency handicapped children. *Journal of School Psychology*,  
25, 53-61.

Watkins, M. W. (2009). Errors in diagnostic decision making and clinical judgment. In T.  
B. Gutkin & C. R. Reynolds (Eds.), *Handbook of school psychology* (4th ed.; pp.  
210-229). New York: Wiley.

Wilson, M. S., & Reschly, D. J. (1996). Assessment in school psychology training and  
practice. *School Psychology Review*, 25 (1), 9-23.

Ysseldyke, J.E., Burns, M., Dawson, P., Kelly, B., Morrison, D., Ortiz, S., Rosenfield, S.,  
& Telzrow, C. (2006). *School psychology: A blueprint for training and practice*  
III. Bethesda, MD: National Association of School Psychologists.