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Assessing Spanish-Speaking Children: A Comparison of International Practices

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Honors Project

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## Introduction

According to The National Center for Educational Statistics, 7.7% of all public K-12 students in the United States (US) speak Spanish in the home, representing 76.5% of all English-language learner (ELL) students (2013). Children exposed to two languages are referred to in the literature as ELLs, language minorities and/or bilingual children. As these children enter school, language disorders and differences may become apparent to the Speech-Language Pathologist (SLP). It is the responsibility of the SLP to determine whether a disorder exists or if what is being observed is simply an issue of language difference. As such, it is important for SLPs, who may or may not speak Spanish, to understand and follow practices for this group outlined by the American Speech-Language-Hearing Association (ASHA) so as not to underestimate children's skills or over identify language disorders.

Studies conducted in the US and other countries have examined assessment practices of SLPs working with bilingual children; however practices used by SLPs in Spanish-speaking countries have not been examined. Identifying practices used by SLPs in Spanish-speaking countries may inform current practice in the US where the number of Spanish-speaking children is increasing. The purposes of this project were to (a) summarize the assessment practices recommended by the ASHA for bilingual children, (b) identify assessment practices SLPs are using to assess bilingual children in the US, (c) obtain information regarding assessment practices used in Spanish-speaking countries with bilingual children, and (d) determine the similarities and differences in bilingual assessment practices used by SLPs in the US and SLPs in Spanish-speaking countries. Information obtained from SLPs in Spanish-speaking countries may help to inform assessment practices used with Spanish-speaking children in the US. The following sections include a description of ASHA recommended practices and a review of

studies conducted nationally and internationally. Although Spanish was reportedly spoken in the international studies, none of the studies were conducted in Spanish-speaking countries.

### **Recommended Practices for Bilingual Assessment**

ASHA has developed guidelines for assessing bilingual individuals (ASHA, n.d.). ASHA recommends SLPs obtain a detailed case history, utilize parent surveys, conduct oral-peripheral examinations, use assessment tools including criterion-referenced measures and dynamic assessment, accommodate the client by modifying standardized assessment procedures, obtain a speech and language sample, and conduct audiology assessments. Practices are described in detail in the following text.

A case history is obtained for the purpose of compiling information about an individual's background (e.g. medical, linguistic, behavioral, family, and academic). This information is collected through an interview. Whereas in a standard case history with a monolingual speaker the clinician may ask questions about language milestones, with a bilingual client those questions may be modified to include questions about language exposure and experiences in all languages. Case histories should include: information regarding the age at which languages were acquired as well as the manner of acquisition, dialects used, and how the language(s) are used at home and at school/work and within the family. Additionally, information regarding accent, dialect, linguistic background, length of exposure to each language, and the language of choice when interacting with peers should be considered. Other considerations should include a record of English-learning progress, the language of academic instruction and performance in each language, contact with native speakers of the primary language, and the age of immigration (ASHA, n.d.).

Whereas case histories may be used to collect more broad background information, questionnaires can be used to collect more in depth information about a particular area during assessment. For instance, parent questionnaires may be used to obtain information regarding a child's early language development. For bilingual clients, questionnaires can provide language acquisition information that can assist an SLP in better understanding the linguistic abilities of the client prior to or during formal assessment (ASHA, n.d.).

Oral-peripheral examinations conducted to assess the structures and function of the oral mechanism are also used with bilingual clients. For bilingual clients who may not fully comprehend what is being asked of them, visual prompts can be used to accompany verbal instructions. For instance, the SLP can provide models of the motions and movements they wish the client to imitate. Some of these might include: opening and closing the mouth, sticking out the tongue, and moving the tongue from side to side or up and down. By providing models, structures and function can be assessed without relying exclusively on language (ASHA, n.d.).

Several types of assessment tools have been determined by ASHA as appropriate for bilingual clients. These include both criterion-referenced and norm-referenced measures. Whereas the purpose of criterion-referenced measures is to identify individual strengths and weaknesses, the purpose of norm-referenced measures is to compare an individual performance to that of same age peers. Criterion-referenced measures are used to determine the abilities and limitations of a client in the language in which the test is administered. They also allow the clinician to assess the bilingual client in both languages and then use the information gathered to determine linguistic abilities in each language. Although norm-referenced measures can be useful in learning about a language (the language of the test), ASHA discourages the exclusive use of norm-referenced measures with bilingual clients, as these measures typically lack

bilingual representation in the standardization sample, thus making the data unreliable (ASHA, n.d.).

When using norm-referenced measures, accommodations and modifications to standardized assessment procedures are appropriate. ASHA defines an accommodation as “an adjustment or change to the environment or mode of client/patient response in order to facilitate access and interaction and to remove barriers to participation” and a modification as a “change in material, content, or acceptable response” (ASHA, n.d.). For bilingual clients appropriate accommodations and modifications include: rewording and providing additional instructions beyond permitted instructions, providing additional cues or repeating stimuli, and allowing extra time for responses on timed tests. Additionally allowing clients to skip items not relevant to them, using alternate scoring rubrics, and requesting explanations for responses for responses may also be appropriate. Modifications and accommodations may allow for more accurate assessment outcomes (ASHA, n.d.).

Speech and language sample analysis is not only appropriate but also is informative. ASHA recommends the use of speech and language sampling to offer insight regarding speech and language skills in both languages of bilingual clients. Samples can be collected through a variety of ways (e.g. narratives, interviews, conversation) in all languages used by the client. The speech and language sample obtained can then be used to compare morphological, syntactic, phonological, and lexical systems. Caution is suggested, though, when assessing the similarities and differences of these systems. The information provided may be useful in assessing, and ultimately diagnosing, the client, but the acquisition of these systems may have differences depending on the language (ASHA, n.d.).

Information about speech perception and hearing is collected during an audiological assessment. Usually an audiological assessment includes a standard hearing screening to confirm normal hearing. This information can assist a clinician in determining how a client will perform in conversational listening environments. The client's speech and word recognition ability should be evaluated in relation to the individual's background information.

### **SLP Practices in the United States**

The ASHA recommended practices discussed above reflect practices of school-based SLPs in the US according to research (Arias, 2014; Caesar & Kohler, 2007; 2008; Skahan, 2007). When comparing studies conducted by multiple researchers, it seems that the practices are in fact representative of current SLP practices. School-based SLPs in the US are following ASHA guidelines for the most part. The studies pertinent to the current project are discussed in detail in the subsequent paragraphs.

In a study conducted by Arias (2014), certified school-based SLPs ( $n = 166$ ) were surveyed to determine the use of ASHA recommended practices and the Individuals with Disabilities Education Act (IDEA) mandates to assess bilingual children. Note that the current study was a replication of the 2007 Caesar and Kohler study on bilingual assessment practices. Participants reported the frequency with which they conduct bilingual assessment, the assessment techniques used, and the assessment measures used. Additionally, the study listed the most frequently used assessments including tests and informal procedures. The survey asked participants to respond in a variety of ways, including: open-ended, yes/no, and Likert-type scale responses. With regard to bilingual assessment, SLPs reported "often" (37%), "sometimes" (21%), "rarely" (29%), or "never" (13%) assessing bilingual children. In reference to the assessment techniques, participants reported "often": gathering information about the student

from teachers (89.2%), focusing on measuring language skills rather than English proficiency (86.9%), conducting interviews with parents and caregivers about the student's language abilities (73.9%), completing assessments in both the child's native language and English (59.7%), observing the child in structured academic contexts (58.5%), conducting interviews to gain information about a child's cultural background (57.4%), and examining assessment measures for cultural bias (51.2%). Additionally, SLPs reported "often" using assessment measures such as: a variety of formal and informal assessment measures (73.4%), informal assessments in both the child's native language and English (58.3%), standardized assessments in both the child's language and English (49.2%), language samples in the child's native language and English (36.4%), and dynamic assessment in conjunction with formal language tests (28.1%). With regard to the most frequently used specific tests participants reported: *Clinical Evaluation of Language Fundamentals-4* (CELF; 22.3%), *Preschool Language Scale-5* (PLS; 21.1%), *Expressive One-Word Picture Vocabulary Test* (EOWPVT; 18.1%), and *Receptive One-Word Picture Vocabulary Test* (ROWPVT; 16.3%). Additionally, participants reported using the following informal procedures: language sampling (24.1%), interviews (19.9%), and narrative retells (6.6%).

Caesar and Kohler (2007), surveyed certified school-based SLPs in Michigan ( $n = 130$ ) to determine the use of ASHA recommended practices and specific tests commonly used to assess bilingual children. Participants responded to the survey questions in a variety of ways, including: open-ended, yes/no, and Likert-type scale responses. Participants reported the frequency with which they used formal and informal measures, information from varied sources, and interpreters. Additionally, they reported how often they assessed children in both of their languages and whether or not they observed children in a variety of contexts. Participants were

asked to report most frequently used tests, informal procedures and the language of administration. With regard to assessment procedures, the most frequently used tests included: *Peabody Picture Vocabulary Test* (PPVT; 49.5%), CELF (35.0%), EOWPVT (32.0%), PLS (22.3%), *Test of Language Development- Primary/Intermediate* (TOLD-P/I; 18.4%), and the ROWPVT (12.6%). In addition, respondents also reported using language sampling (33.0%), interviews (22.0%) and classroom observations (12.0%). SLPs reported mostly using English for testing. With regard to recommended assessment practices the majority of participants reported using a variety of formal and informal procedures, multiple sources of information, and observation in a variety of contexts. The use of interpreters and assessment in the native language were reported by fewer participants.

In a similar study, Caesar and Kohler (2008) sampled ASHA certified school-based SLPs in Michigan ( $n = 409$ ) to determine specific tests used during assessment. Specifically, participants reported clinical background and work setting, caseload composition, and the frequency with which specific tests were used “to assess English-speaking children.” The participants were asked to respond to the survey questions in a variety of ways, including: open-ended, yes/no, and Likert-type scale responses. With regard to clinical background and work setting participants reported a mean experience of 14 years. Additionally, the majority of SLPs were employed full-time working in more than one setting - preschool, middle school, and/or high school. In reference to caseload composition participants reported a mean caseload size of 49.6 with caseload diversity having a mean of 2.1. Additionally, the caseload severity was reported as mild (13.9%), moderate (21.0%), moderately severe (11.6%), and severe (10.1%). With regard to formal assessment procedures the top ten most frequently used were: CELF, PPVT, PLS, EOWPVT, TOLD, ROWPVT, *Test for Auditory Comprehension of Language*

(TACL), *Language Processing Test* (LPT), *Test of Problem Solving* (TPS), and *Expressive Vocabulary Test* (EVT). In addition, respondents indicated using informal assessment procedures such as parent-teacher interviews, language sampling, informal observations, classroom observations, and dynamic assessment.

Skahan, Watson, and Lof (2007), surveyed ASHA certified SLPs who serve preschool and school-aged populations throughout the US ( $n = 309$ ) to determine the use of ASHA recommended practices when a child is suspected of having a speech sound disorder. Participants also reported how frequently direct assessment procedures, published tests, and speech sound analysis procedures were used. Additionally, SLPs reported assessment methods used for non-native English speakers. In regard to direct assessment procedures participants reported “always”: estimating intelligibility (75.4%), using a single-word test to determine percentile rank and standard score (74.1%), obtaining a hearing screening (70.6%), recording stimulability of erred sounds (68.0%), assessing oral motor skills using nonspeech tasks (57.6%), and assessing oral motor skills using speech tasks (54.4%). In reference to published tests SLPs indicated “always” using: *Goldman-Fristoe Test of Articulation* (GFTA; 51.8%), *Photo Articulation Test* (9.7%), *Khan-Lewis Phonological Analysis* (KLPA; 8.1%), *Arizona Articulation Proficiency Scale* (4.9%), and *Assessment of Phonological Processes* (4.5%). In regard to speech sound analysis procedures participants reported “always” using: phonological processes (51.1%), connected speech sample (36.2%), phonetic inventory (36.2%), and syllable/word shapes (11.3%). Additionally, frequently used assessment procedures were identified in reference to non-native English speakers: informal procedures (67%), English-only standardized tests (35%), standardized test from client’s native language (19%), and developed local norms (11%).

Assessment practices including case histories and questionnaires are used to collect information during initial assessment of a client. These techniques are not only commonly used, but they are completed in different ways. Interview-style techniques were found to be commonly used with parents, teachers, and/or caregivers (Arias, 2014; Caesar & Kohler 2007; 2008).

Across studies, participants reported using a variety of different practices. These practices included: observations in academic contexts, a variety of formal and informal procedures, and standardized testing in both languages (Arias, 2014; Caesar & Kohler, 2007; 2008). Although participants reported a variety of assessment procedures, all of the studies reported using a number of both informal and formal assessment procedures (Arias, 2014; Caesar & Kohler, 2007; 2008). Moreover, there were differences in practices reported. Arias (2014) found that over half of the SLPs were assessing the client in both languages known to the client, while Caesar and Kohler (2007; 2008) reported that SLPs typically only used English when assessing bilingual clients.

Language sampling, although an ASHA recommended practice for bilingual individuals, is uncommonly used by SLPs assessing bilingual individuals (Arias, 2014; Caesar & Kohler, 2007; 2008). Each of the three studies referenced reported the use of language sampling, but the participants reported using this type of assessment less than half of the time (Arias, 2014; Caesar & Kohler, 2007; 2008). The study conducted by Skahan et al. (2007) did not reference any use of language sampling by SLPs when assessing bilingual clients.

Audiological assessment was also not commonly reported as being used to assess bilingual individuals. One study, though, did find that audiological assessment was used often. It was determined to be an assessment procedure “always” used 70% of the time (Skahan et al.,

2007). Only one study collected for this research reported the use of audiological assessment but the procedure was used well over half of the time bilingual assessment was conducted.

The use of standardized assessment practices is a useful, yet cautioned practice when assessing bilingual individuals. It is important to consider the representation of bilingual individuals when choosing to use a standardized assessment practice. When referencing the studies, it was found that a variety of standardized tests were used across studies. The standardized tests used included: CELF, PLS, EOWPVT, ROWPVT (Arias, 2014; Caesar & Kohler, 2007; 2008; Skahan et al., 2007), and the PPVT (Caesar & Kohler, 2007; 2008). These formal assessment procedures were reportedly given to the bilingual client in English the majority of the time.

### **SLP Practices in Other Countries**

Studies examining bilingual assessment practices of school-based SLPs in other countries also reflected the ASHA recommended practices (Jordaan, 2008; Mcleod & Baker, 2014; Williams & Mcleod, 2012). As with studies conducted exclusively in the US, studies surveying SLPs in other countries show that practices used are also consistent with ASHA recommended guidelines for the most part.

Jordaan (2008) surveyed practicing speech-language therapists from 13 countries ( $n = 99$ ) to determine international intervention practices for bilingual children. The participants reported background information of the clients on their caseload, personal language profiles, and use of interpreters with clients. In reference to the speech-language therapists' language competencies, the majority were monolingual (74%) and reported using only one language for intervention. In regard to the use of interpreters, therapists reported using interpreters minimally (18%) for assessment.

In a study conducted by Mcleod and Baker (2014) practicing SLPs ( $n = 231$ ) who attended Speech Pathology Australia seminars were surveyed about clinical practices with children having speech sound disorders. The participants reported frequency of use of recommended speech assessment tools, speech assessment components, and assessment methods used with children who speak languages other than English. In regard to speech assessment tools SLPs reported “always” using: conversational speech sampling (58.3%), articulation surveys (38.1%), informal/homemade single word tests (21%), *Daz Roberts Test of Articulation* (9.4%), diagnostic evaluation of articulation and phonology (8.6%), and GFTA (5.5%). In reference to speech assessment components participants reported “always” using: parent interview + child case history (89.9%), single word tests to determine sounds in error (88.9%), stimulability of error sounds (77.7%), determining phonological processes (75.8%), estimating intelligibility (55.1%), and determining phonetic inventory (51.2%). In regard to assessment methods with children who speak languages other than English SLPs responded “always” using: informal procedures (70.8%), English-only standardized tests (45.6%), developed local norms (10.3%), and standardized tests in the child’s first language (3.7%).

Williams and Mcleod (2012) sampled Australian SLPs ( $n = 128$ ) who worked in multiple settings to determine typical speech and language assessment methods used with multilingual children. Additionally, participants reported the use of any type of interpreter (e.g. professional, parent, etc.) during assessment. After being provided a list of methods, respondents indicated the methods used to assess children. Participants reported “always” using: informal procedures (76.7%), English-only standardized tests (41.4%), dynamic assessment (28.0%), developed local norms (13.0%), processing approaches (6.3%), and standardized tests for the child’s first language (1.4%). In reference to language assessment methods respondents indicated “always”

using: informal procedures (78.2%), English-only standardized tests (33.3%), dynamic assessment (20.7%), developed local norms (6.1%), processing approaches (3.9%), and standardized tests for the child's first language (0.0%). In regard to the type and use of interpreters, the numbers of participants who utilized assistance were: a professional interpreter (27), a parent as interpreter (11), a sibling as interpreter (2), the child as own interpreter (1), and colleague as interpreter (3).

When comparing studies conducted in other countries it was determined that only one study reported the use of case histories or questionnaires (Mcleod & Baker, 2014). This is interesting since case histories and questionnaires are used often in the US. Similar to SLPs in the US, SLPs in other countries report using a number of assessment procedures when assessing bilingual clients. Specifically studies report frequent use of informal assessment procedures and dynamic assessment with bilingual children (Mcleod & Baker, 2014; Williams & Mcleod, 2012).

Obtaining both a speech and language sample and an audiological assessment were not only uncommon practices in the US, but in other countries as well. None of the studies reviewed suggested that these two assessment practices are used in other countries. This is problematic given that assessment results can be rendered invalid if the problems observed are due to a hearing loss or perhaps other issues that may not be detected through formal standardized assessment procedures.

### **Purpose**

Various studies conducted in the US have reported the bilingual assessment practices used by SLPs in the US; however, the assessment practices used in Spanish-speaking countries have not been reported. Identifying practices used by SLPs in Spanish-speaking countries may inform current practice in the US where the number of Spanish-speaking children is increasing.

This study explored this issue using the following questions concerning assessment practices used to assess school-age Spanish-speaking children:

- (1) What are the practices recommended by ASHA when assessing bilingual children?
- (2) What practices are SLPs in the US using?
- (3) What assessment practices are used in Spanish-speaking countries?

## **Method**

### **Recruitment**

Following approval of the Bowling Green State University Human Subjects Review Board, prospective participants in Spain were recruited by the principal investigator (PI), who was completing a study abroad in Alcalá de Henares, Spain. Prospective participants in Mexico were recruited by the PI's research advisor with colleagues in Mexico City, Mexico. SLPs of school-age Spanish-speaking bilingual children and who were at least 18 years of age were invited to participate via email. The email contained details about the study and contact information for the PI. Interested participants were sent a hyperlink email containing the consent document and the URL to the Qualtrics questionnaire. Multiple attempts were made to contact interested participants (Dillman, 2006). The initial recruitment email was sent to ten prospective participants. The first email resulted in four interested participants and the second and third follow-up recruitment emails resulted in an additional four participants.

### **Participants**

Of the ten participants emailed, eight met inclusion criteria and completed the questionnaire. Inclusion criteria included (a) working with bilingual children in school and (b) over the age of 18. Four participants were from Spain and four were from Mexico. All

participants were female. Participants were monolingual Spanish-speakers ( $n = 3$ ), bilingual Spanish- and English-speakers ( $n = 5$ ) or multilingual (Spanish, English, Mexican Sign Language) ( $n = 1$ ). Five participants were employed in a school setting for more than ten years ( $n = 5$ ), two participants were employed in a school setting for 1-5 years ( $n = 2$ ), and one participant for 6-10 years ( $n = 1$ ). Of the eight participants, five had more than 20 years practicing in their profession while the other three had a minimum of five years of practice. All participants reported receiving a degree from a university, though varying titles were reported. Respondents reported other languages spoken by children on their caseloads included: Romanian, Mexican Sign Language, Chinese or Ukrainian.

### **Procedure**

Interested participants were sent a hyperlink email containing the consent document, expression of gratitude, and the URL to the Qualtrics questionnaire. Upon entering the questionnaire, participants were asked to read the consent document approved by Bowling Green State University's Human Subjects Review Board, containing: an invitation to participate, purpose of the study, procedure details, time anticipated for survey completion (~15 minutes), an explanation of anonymity and confidentiality, and an expression of gratitude. Prior to completing the survey, all participants were required to indicate that they were (a) working with bilingual children in schools and (b) over the age of 18. The questionnaire contained the informed consent document on the first page, disallowing participants to begin without consenting first. Confidentiality protection was inherent to Qualtrics and participation was voluntary.

### **Questionnaire**

The questionnaire was developed following a literature review of similar studies investigating assessment practices. Works of interest included studies exploring practices used by SLPs to assess school-age bilingual children in the US and other countries. The final version of the questionnaire consisted of 21 items and was arranged into three different sections. The first section included questions regarding the educational background and training of the participant, and the second section inquired about the participant's work setting and caseload composition. The third and final section included questions about the assessment practices used by the participant. All questions elicited multiple-choice or fill-in-the-blank responses. The questionnaire can be found in the Appendices; Appendix A includes the English version and Appendix B includes the Spanish version.

## **Results**

### **Research Question 1**

To answer research question one, "What are the assessment practices recommended by the American Speech-Language-Hearing Association for bilingual children?" the Bilingual Service Delivery document written by ASHA was reviewed. Recommended practices included: obtaining a detailed case history, utilizing parent surveys, conducting oral-peripheral examinations, using assessment tools including criterion-referenced measures and dynamic assessment, accommodating the client by modifying standardized assessment procedures, obtaining a speech and language sample, and conducting audiology assessments. A description of each practice is found in Table 1.

### **Research Question 2**

To answer research question two, “What assessment practices are SLPs in the US using to assess bilingual children?” a literature review was conducted. A summary of the results of the reviewed studies is included in Table 2. Across studies participants reported using a variety of different practices and modifying standardized procedures for bilingual clients. In general practices included: observations in academic contexts, a variety of formal and informal procedures, dynamic assessment, and standardized testing in both languages (Arias, 2014; Caesar & Kohler, 2007; 2008). Standardized tests including CELF, PLS, EOWPVT, ROWPVT (Arias, 2014; Caesar & Kohler, 2007; 2008; Skahan et al., 2007), and the PPVT (Caesar & Kohler, 2007; 2008) were reported. These formal assessment procedures were reportedly given to the bilingual client in English majority of the time. Language sampling was uncommonly used by SLPs when assessing bilingual individuals (Arias, 2014; Caesar & Kohler, 2007; 2008). Similarly, with the exception of one study (Skahan et al., 2007), audiological assessment was not commonly conducted with bilingual individuals. Moreover, differences in language of assessment were also reported with SLPs assessing in both languages (Arias 2014) and exclusively in English (Caesar and Kohler 2007; 2008).

### **Research Question 3**

To answer research question three, “What assessment practices are used in Spanish-speaking countries with bilingual children?” participant responses to questions one through four of the questionnaire regarding assessment practices were compiled. Participant responses to question four had two options, yes or no. While one participant reported not using language sample analysis, six reported the use of language sample analysis during initial assessment. Individual participant responses to questions one through three are provided in Table 3.

### **Research Question 4**

To answer research question four, “What are the similarities and differences in bilingual assessment practices used by SLPs in the US and SLPs in Spanish-speaking countries”, information obtained during the literature review was compared with new data collected for the present study to determine consistencies. The findings are reported in Figure 1.

### **Discussion**

The current study examined assessment practices of SLPs in the US when assessing Spanish-speaking children, and explored practices used in Spanish-speaking countries in order to potentially inform clinical practice in the US. Specifically, the researcher sought to determine if there are practices that might be used during bilingual assessment in the US. This issue is of particular interest due to the large number of English-language learner children in the US and the ongoing issue of misdiagnosis that occurs as a result of not using best practice. It may be the case that if clinicians are using practices not considered the gold standard, more bilingual children may be misdiagnosed due to underestimation of skills. In the following sections practices used exclusively by SLPs in the US in, and Spanish-speaking countries, are discussed followed by a section on similarities and differences between them.

ASHA recommends the following practices when assessing bilingual children: case histories and questionnaires, oral-peripheral examinations, assessment tools including criterion-referenced and dynamic assessment, accommodation and modification, speech and language sampling, and audiology assessments. The use of these practices is important for SLPs who assess bilingual individuals. The more information SLPs have about an individual client they are working with, the more likely an accurate diagnosis will be made. Each of the ASHA recommended practices offers new and valuable information that is needed to determine the presence of a disorder or confirm a language difference.

In general, studies show that SLPs in the US are in fact using recommended practices; however the frequency with which specific practices are used varies to some degree. SLPs are consistently using case histories/questionnaires frequently during bilingual assessment (Arias, 2014; Caesar and Kohler, 2007, 2008) as well as oral-peripheral examinations and audiological assessment (Skahan et. al., 2007). Specifically SLPs are using these examinations to assess structure and function with speech and nonspeech tasks (Skahan et. al., 2007). The use of case histories/questionnaires, oral peripheral examinations, and audiological assessment may be explained by the absence of language barriers. Each of these assessment practices requires minimal knowledge of the native language of the client due to the nature of the practice. For SLPs who do not speak the client's native language, assessment practices that require minimal knowledge of the native language of the client prove to be very helpful when gathering information about the client during assessment. It may be for this reason that SLPs consistently use these practices.

SLPs in the US use assessment tools such as standardized tests and/or dynamic assessment with different frequency (Arias, 2014; Caesar and Kohler, 2007, 2008; Skahan et. al. 2007). The use of standardized tests is reported by SLPs in the US as an often used practice, however standardized tests administered in the native language do not occur frequently. Across studies the use of standardized tests in the native language is inconsistently reported, where some studies report participants do test in the native language (Arias, 2014; Skahan et. al. 2007) and others do not (Caesar and Kohler, 2007, 2008). It is important to note that by using culturally and linguistically adapted standardized tests in the native language and in English, the test scores can be compared to provide information about the client's skills in each language. The use of dynamic assessment is reported by SLPs in the US as an infrequently used practice (Arias, 2014;

Caesar and Kohler, 2007, 2008). Those who did report the use of dynamic assessment reported using it less than half of the time (Arias, 2014) or never (Caesar and Kohler, 2007, 2008). There may be various reasons as to why dynamic assessment, although a recommended practice, is not frequently used as a bilingual assessment practice. One such reason may include the challenges presented when using dynamic assessment with a bilingual individual. Dynamic assessment requires participation and active involvement, thereby requiring the potentially monolingual SLP to have more extensive knowledge of the native language of the client. The monolingual SLP may find this challenge to be too demanding and may then be in need of an interpreter with linguistic knowledge. The need for an interpreter with linguistic knowledge may prove to be another reason dynamic assessment isn't commonly used; there may be a lack of available interpreters available for assessment. In this case, a monolingual SLP may be incapable of overcoming the challenges presented by dynamic assessment and therefore is not using the practice.

Not all SLPs in the US are using speech and language sampling (Skahan 2007), and when speech and language sampling is used it is only being used some of the time (Arias, 2014; Caesar and Kohler, 2007, 2008). SLPs in the US may not be using speech and language sampling for several reasons. Speech and language sampling may require the SLP to create and respond to questions asked and answered by the client. These sampling issues may present language barriers between the SLP and the client when speaking in the native language. Whereas assessment practices such as case histories/questionnaires only require minimal knowledge of the native language, speech and language sampling requires extensive knowledge of the native language.

Studies show that SLPs in Spanish-speaking countries are in fact using similar recommended practices as SLPs in the US, however results indicate that the frequency with

which specific practices are used varies to some degree. Consistent with the SLP responses in the US, SLPs in Spanish-speaking countries reported the use of case histories/questionnaires. It may be that case histories/questionnaires are generally used as a bilingual practice because minimal native language skills are needed. By having even a limited knowledge of the native language, an SLP may still be able to collect important background information of the bilingual client.

Although the case histories/questionnaires can be completed at home, a majority of the respondents indicated conducting a parent/teacher interview. In this case, the SLP may need to be proficient in the language in order to converse and question the parent of the bilingual child. SLPs may have reported case histories/questionnaires frequently for various reasons. It may be that there is an interpreter assisting the SLP during the interview. An interpreter would then allow the SLP to gather the background information needed without extensive knowledge of the language. Similarly, collecting a case history/questionnaire may be less challenging than conducting an assessment practice that requires linguistic knowledge with the help of an interpreter. The interpreter may not be able to accurately portray the linguistic knowledge of the client, therefore resulting in a potential misdiagnosis.

The responses of SLPs in Spanish-speaking countries are inconsistent with the responses of SLPs in the US when reporting the use of standardized tests and dynamic assessment. Although the use of standardized tests is reported by SLPs in the US as an often used practice, standardized tests administered in the native language do not occur frequently. This is different from testing in Spanish-speaking countries where SLPs report the use of Spanish standardized tests. Several participants reported the use of standardized tests that have Spanish versions. For example the CELF, a test that was also reportedly used by SLPs in the US in the English-only version. The use of other unused Spanish assessment tools in the US may prove to be very useful

in assessing Spanish-English bilingual children in the schools. The reported frequency of dynamic assessment, though, seems to be consistent with SLP responses in the US; SLPs in Spanish-speaking countries did not report the use of dynamic assessment. The infrequent use of dynamic assessment by both SLPs in the US and Spanish-speaking countries may be due to various reasons. It may be that the assessment practice of dynamic assessment is not well known to the SLPs in Spanish-speaking countries. In reference to the length of time other assessment practices (such as case histories/questionnaires) have been available, dynamic assessment is still in the early phases. It may be that the practice is proving challenging for all SLPs and may therefore be an infrequently used assessment practice.

The use of speech and language sampling varied by country. Whereas SLPs in the US reported not commonly using speech and language sampling, SLPs in Spanish-speaking countries did report the use of speech and language sampling. Note, though, that SLPs in the US reported the use of speech and language sampling by frequency; whereas SLPs in Spanish-speaking countries reported either using speech and language sampling or not using it at all. The participants from Spanish-speaking countries, therefore, did not report the frequency with which speech and language sampling is used when assessing a client, but only if they use it as an assessment practice in general. Clearly the data regarding language sampling cannot be compared by means of frequency. Additional data are needed to better understand the use of this practice.

### **Limitations**

The results of the current study provide data starting point for this line of work, but are no means without limitations. One such limitation is the sample size of the study. The results obtained may not be representative of practice in all Spanish-speaking countries or all SLPs in

the countries' samples. Further, SLPs in different demographic regions may have different training experiences and resources available to them and as such different assessment practices. There were also limitations with the questionnaire itself. For instance, the wording of the questions may have lost the intended meaning when translated. The questions may have then seemed unclear and possibly elicited different responses than were intended.

## **Conclusion**

While the results of this study may not offer best assessment practice as it relates to all instances of bilingual assessment, the findings do offer insights into the bilingual assessment practices currently being used. Studies indicate that although SLPs in the US and in Spanish-speaking countries are using similar recommended practices, the frequency with which these practices are used differ to an extent. ASHA recommended practices, such as case histories/questionnaires, are frequently used in the US and in Spanish-speaking countries. Practices such as standardized tests, and speech and language samples were reported less frequently in the US than in Spanish-speaking countries, while practices such as dynamic assessment were infrequently used by the US and Spanish-speaking countries. By understanding the practices used nationally and internationally, SLPs in the US may be able to better determine best practice when assessing bilingual children.

The results of this study provide a basis of information that may ultimately help to bridge the gap between assessment practices in the native language and bilingual assessment practices. Understanding the practices outlined in this study may play an essential role in providing an accurate diagnosis to bilingual individuals.

*Procedural Overview*

Activity	January-April	May	June	July	August
<b>Recruit Participants/ Data Collection</b>	X				
<b>Data analysis</b>		X			
<b>Finish Honors Project</b>				X	
<b>Submit Honors Project</b>					X

*Analysis*

<b>Research Questions:</b>	Data Source	Proposed Analyses
1. <i>What are the practices recommended by the American Speech-Language-Hearing Association when assessing bilingual children?</i>	Literature	Descriptive
2. <i>What practices are SLPs in the United States using?</i>	Literature	Descriptive
3. <i>What assessment practices are used in Spanish-speaking countries?</i>	Questionnaire	Descriptive
4. <i>What are the similarities and differences in assessment practices used by SLPs in the United States and SLPs in Spanish-speaking countries?</i>	Literature/Questionnaire	Descriptive

The findings of this study will be compiled into a report to satisfy the requirements of the BGSU Honors Program and shared at the BGSU Undergraduate Research Symposium.

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Table 1

*ASHA Recommended Assessment Practices*

Practice	Purpose	Example
Case History	Case histories are obtained to compile information about an individual's background (e.g. medical, linguistic, behavioral, family, academic, etc.) and are collected through an interview.	Information about the client's accent, dialect, linguistic background, length of exposure to each language, language of choice with peers, age of immigration, and all language background information.
Questionnaires	Questionnaires are used to collect more in depth information about a particular area during screening as well as assessment.	May be used to obtain information regarding a child's early language development.
Oral-peripheral Examination	Oral-peripheral exams are conducted to assess the structures and function of the oral mechanism.	SLP can provide models of the movements they wish the client to imitate including: opening and closing the mouth and moving the tongue from side to side or up and down.
Assessment Tools	Assessment tools determine abilities and limitations of clients in the language in which the test is administered allowing the clinician to determine linguistic abilities in each language.	May be considered criterion-referenced measures or norm-referenced measures (e.g. standardized assessments).
Accommodation and Modification	Accommodation and modification adjust or change the environment or mode of client/patient response in order to to remove barriers to participation, including a change in material, content, or acceptable response.	Appropriate accommodations and modifications include: rewording and providing additional instructions beyond permitted instructions, providing additional cues, and allowing extra time for responses on timed tests.
Speech and Language Sample	Speech and language samples offer insight to speech and language skills in all languages used by the client.	Samples can be collected through narratives, interviews, conversation, etc.
Audiology Assessments	Audiology assessments provide information about speech perception and hearing is collected.	A standard hearing screening to confirm normal hearing.

*Note.* Bilingual Service Delivery. *ASHA Practice Portal*. Retrieved from [http://www.asha.org/PRPSpecificTopic.aspx?folderid=8589935225&section=Key\\_Issues](http://www.asha.org/PRPSpecificTopic.aspx?folderid=8589935225&section=Key_Issues)

Table 2  
*Summary of Results and Frequency of Assessment Practice Use by Study*

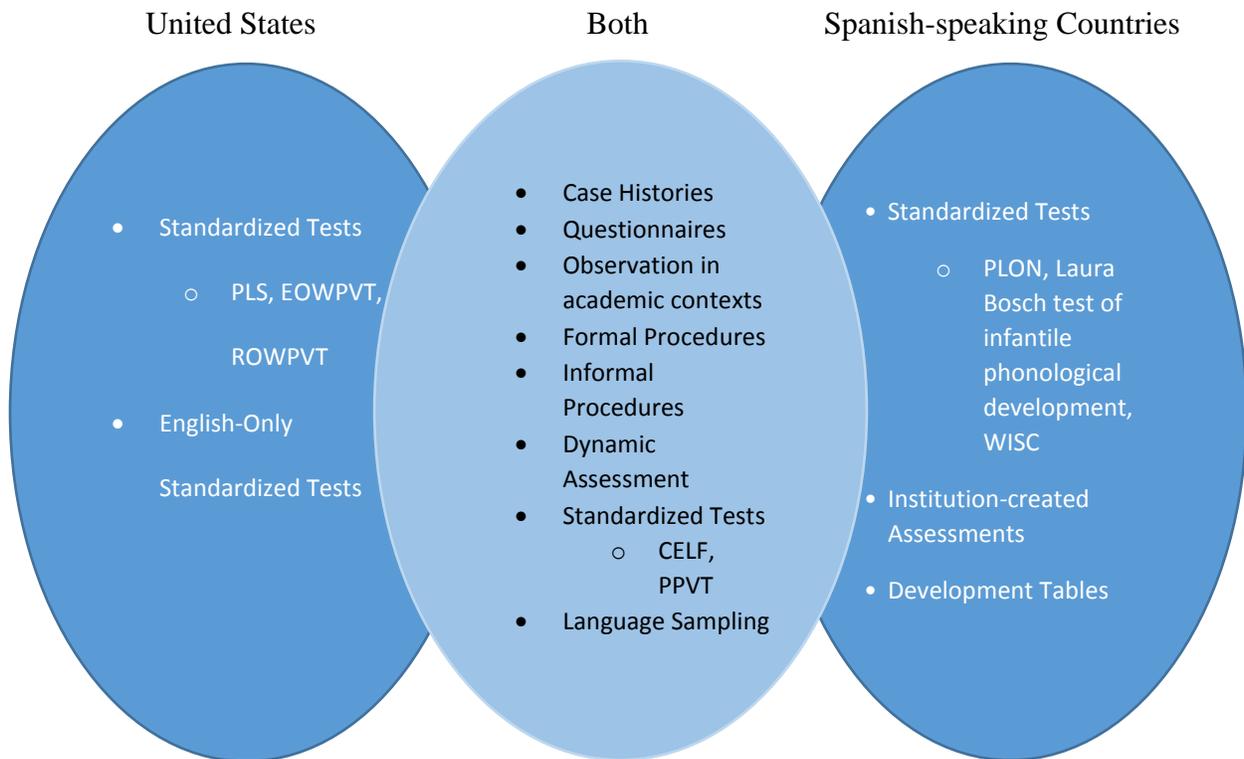
Study	Assessment Practice	Frequency	Study	Assessment Practice	Frequency	Study	Assessment Practice	Frequency
Arias (2014)	Gathering information about student from teachers	89.20%	Caesar and Kohler (2007)	PPVT-3	49.50%	Caesar and Kohler (2008)	EOWPVT	
	Measuring language skills	86.90%		CELF-3	35%		TOLD	
	Parent Interviews	73.90%		Language Sampling	33.00%		ROWPVT	
	Assessments in both the native language and English	59.70%		EOWPVT-R	32.00%		TACL	
	Observation in academic context	58.50%		Parent/teacher interviews	22.30%		Language Processing Test	
	Interviews	57.40%		PLS-3	22.30%		Test of Problem Solving	
	Examining assessment measures for cultural biases	51.20%		TOLD	18.40%		EVT	
	Variety of formal and informal assessment measures	73.40%					Parent-teacher interviews	
	Informal assessments in native language and English	58.30%		Classroom Observations	13.60%		Language sampling	
	Standardized assessments in both languages	49.20%		ROWPVT	32.00%		Observation	
	Language samples in native language and English	36.40%		Language Sampling	22.30%		Classroom observations	
	Dynamic assessment	28.10%		Interviews	12.60%		Dynamic assessment	
	CELF-4	22.30%		Classroom Observations	33.00%		Estimating Intelligibility	75.40%
	EOWPVT	18.10%		Variety of Formal and Informal Procedures	22.00%		Single-word test	74.10%
	ROWPVT	16.30%		Multiple Sources of Information	12.00%		Hearing screening	70.60%
	Language Sampling	24.10%		Observation in a variety of contexts			Stimulability	68.00%
	Interviews	19.90%		Use of Interpreters			Assessing oral motor skills using nonspeech tasks	57.60%
	Narrative Retells	6.6		Assessment in Native Language			Assessing oral motor skills using speech tasks	54.40%
		Clinical Evaluation of Language Fundamentals		GFTA	51.80%			
		PPVT		PAT	9.70%			
		PLS		ARIZONA	4.90%			
				APP	4.50%			
				Phonological Processes	51.10%			
				Connected speech sample	36.20%			
				Phonetic Inventory	36.20%			
				Syllable / Word Shapes	11.30%			
				Informal procedures	67.00%			
				English standardized tests	35.00%			
				Native standardized tests	19.00%			
				Developed local norms	11.00%			

*Note.* CELF = Clinical Evaluation of Language Fundamentals, EOWPVT = Expressive One-Word Picture Vocabulary Test, ROWPVT = Receptive One-Word Picture Vocabulary Test, TOLD = Test of Language Development, PPVT = Peabody Picture Vocabulary Test, PLS = Preschool Language Scale, TACL = Test for Auditory Comprehension of Language, EVT = Expressive Vocabulary Test, GFTA = Goldman-Fristoe Test of Articulation, PAT = Photo Articulation Test, ARIZONA = Arizona Articulation Proficiency Scale, APP = Assessment of Phonological Processes.

Table 3

*Participant Responses to Individual Questions Regarding Assessment Practices Used in Spanish-Speaking Countries*

Participant	Response
	Q1. When a child first comes to you with a suspected disorder, how do you choose what you are going to do to confirm a disorder?
P1	Systematic observation, information from the parents and school, and objective tests
P2	Previous reports, personal interview with student to determine pragmatics, specific tests, personalized report, create a team plan
P3	Parent interview, linguistic analysis of language and learning, analysis of reading, writing, and math
P4	Age and parent interview
P5	Observation, standardized tests, age, group, developed norm parameters
P6	Level of performance in language, cognition
P7	Age, clinic history, parent interview, observation
	Q2. Please tell me about the practices you use most frequently to assess children.
P1	Specific tests
P2	Observation, Illinois Test of Psycholinguistic Abilities, Raven's Progressive Matrices, Test de Análisis de Lectoescritura, Prueba de Lenguaje Oral Navarra
P3	Qualitative Evaluation created by the institution
P4	Development tables
P5	Laura Bosch test of infantile phonological development, Peabody Picture Vocabulary Test, Prueba de Lenguaje Oral Navarra, Wechsler Intelligence Scale for Children
P6	Janet Norris Situation Discourse Semantic, Articulation tests
P7	Spontaneous and semi-spontaneous tests, standardized tests for language
	Q3. Do you use specific tests (commercially available or SLP created) to assess children? If so, what are the tests that you use?
P1	Yes, Illinois Test of Psycholinguistic Abilities, Laura Bosch test of infantile phonological development, Prueba de Lenguaje Oral Navarra, Reynell Developmental Language Scale, Hearing and Language Protocol for Spanish language cochlear implants
P2	No
P3	No
P4	No
P5	Yes, Laura Bosch test of infantile phonological development, observational records, Peabody Picture Vocabulary Test, Prueba de Lenguaje Oral Navarra, Wechsler Intelligence Scale for Children
P6	Yes, Janet Norris Situational Discourse Semantic Model
P7	Yes, Bilingual English Spanish Assessment, CELF-4 (Spanish), CELF-preschool (Spanish), MacArthur-Bates Communicative Development Inventories



*Figure 1.* Venn diagram outlining the similarities and differences in assessment practices used by SLPs in the United States and SLPs in Spanish-speaking countries. PLS = *Preschool Language Scales*, EOWPVT = *Expressive One-Word Picture Vocabulary Test*, ROWPVT, *Receptive One-Word Picture Vocabulary Test*, CELF = *Clinical Evaluation of Language Fundamentals*, PPVT = *Peabody Picture Vocabulary Test*, PLON = *Prueba de Lenguaje Oral Navarra*, WISC = *Wechsler Intelligence Scale for Children*.

## Appendix A

## Questionnaire (English)

**Please read (Mexico and Spain):**

Thank you again for participating in this study. Please be reminded that your participation is voluntary. Your responses are completely confidential and if this work is published in the future, a pseudonym will be used to maintain your privacy. There are no right or wrong answers to the questions and you may skip questions you do not wish to answer.

- Country of residence

Mexico                  Spain

**Educational Background and Training**

- What is your profession?
- I am particularly interested in assessment practices used to identify speech-language disorders in school-age Spanish-speaking children. Is this one of your responsibilities?
- How many years have you been practicing in your current profession?  
       \_\_\_\_\_ less than 1 year      \_\_\_\_\_ 1-5 years      \_\_\_\_\_ 6-10 years  
       \_\_\_\_\_ 11-20 years      \_\_\_\_\_ 21-30 years      \_\_\_\_\_ more than 30 years
- How many years have you been employed in a school setting?  
       \_\_\_\_\_ less than 1 year      \_\_\_\_\_ 1-5 years      \_\_\_\_\_ 6-10 years  
       \_\_\_\_\_ 11-20 years      \_\_\_\_\_ 21-30 years      \_\_\_\_\_ more than 30 years
- What languages can you speak fluently?
- Where did you receive your training for the current position (e.g. University)?
- Have you had any specialized training in providing services to children who are bilingual?
- If yes, what type of training(s)?

**Work Setting / Caseload Composition**

- How many students are on your current caseload?
- In addition to Spanish what other language(s) is/are spoken by the children you work with?
- What are the ages of the children on your caseload?
- What are the ages of the children you assess (if different from previous question)?

**Assessment Practices**

- When a child first comes to you with a suspected disorder, how do you choose what you are going to do to confirm a disorder? Is it based on age, presentation, or something else?
- Please tell me about the practices you use most frequently to assess children.
- Do you use specific tests (commercially available or SLP created) to assess children?
- If so, what are the tests that you use?
- Do you use language sample analysis?

## Appendix B

## Questionnaire (Spanish)

**Lee (México y España):**

Gracias otra vez por su participación en este estudio. Recuerde que su participación es voluntaria. Sus respuestas son completamente confidenciales y si este estudio es publicado en el futuro, un seudónimo será usado para guardar su privacidad. No hay respuestas correctas o incorrectas a las preguntas y puede dejar de contestar a las preguntas que no desee responder.

## 1. País de residencia

México

España

**Fondo de Educación y Experiencia**

## 1. ¿Cuál es su profesión?

## 2. Tengo interés específicamente en estudios usados para identificar trastornos del habla y lengua en niños de habla hispana de edad escolar. ¿Es esta parte de su responsabilidad?

## 3. ¿Cuántos años ha practicado en su profesión actual?

\_\_\_\_\_ menos que 1 año      \_\_\_\_\_ 1-5 años      \_\_\_\_\_ 6-10 años  
 \_\_\_\_\_ 11-20 años      \_\_\_\_\_ 21-30 años      \_\_\_\_\_ más que 30 años

## 4. ¿Cuántos años lleva ejerciendo en su trabajo actual?

\_\_\_\_\_ menos que 1 año      \_\_\_\_\_ 1-5 años      \_\_\_\_\_ 6-10 años  
 \_\_\_\_\_ 11-20 años      \_\_\_\_\_ 21-30 años      \_\_\_\_\_ más que 30 años

## 5. ¿Qué lenguas puede que hablar con fluidez?

## 6. ¿Dónde estudió para recibir su título para su position actual (ej. la universidad)?

## 7. ¿Ha tenido estudios especializado en proveer servicios a niños que son bilingües?

## 8. Si es así, ¿qué tipos de estudios?

**Centro de Trabajo / Composición de Cantidad de Casos**

## 1. ¿Cuántos de sus pacientes son estudiantes en la actualidad?

## 2. ¿Además a español qué otras lengua(s) hablan los niños con los que trabaja?

## 3. ¿Cuántos años tienen los niños que evalúa?

## 4. ¿Cuántos años tienen los niños que evalúa (si es diferente que la pregunta anterior)?

**Ensayos de Tasacion**

## 1. ¿Cuándo un niño viene a usted por la primera vez con un trastorno posible, cómo elige el criterio que confirmará su trastorno? ¿Se basa en edad, presentación, o algo diferente?

## 2. Describame los estudios que usa más frecuentemente para evaluar a los niños.

## 3. ¿Usa exámenes específicos (disponible a comercio o creado por logopeda) para evaluar niños?

## 4. Si su respuesta es afirmativa, ¿Cuáles son los exámenes que usa?

## 5. ¿Usa analisis de muestra lengua?