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FACTORS AFFECTING SCHOOL-BASED SPEECH-LANGUAGE
PATHOLOGISTS' USE OF LANGUAGE ASSESSMENT
PRACTICES WITH BILINGUAL CHILDREN

by

Lena Gloria Caesar

A Dissertation
Submitted to the
Faculty of The Graduate College
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requirements for the
Degree of Doctor of Education
Department of Educational Studies

ADVISOR: PAULA D. KOHLER

Western Michigan University
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Lena Gloria Caesar

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CHAPTER I

INTRODUCTION

The appropriate, non-biased assessment of bilingual students suspected of speech-language difficulties has become one of the major challenges confronting school-based speech-language pathologists (SLPs) (Battle, 1998; Brice, 2002; Caesar & Williams, 2002; Kayser, 1995). The most recent United States census indicates significant increases in the numbers of culturally and linguistically diverse (CLD) groups (U.S. Bureau of the Census, 2000). Reflecting this trend, schools across the nation are also becoming more multicultural. For example, whereas in 1972 only 22 percent of public school students were considered part of a minority group, by the year 2002 this percentage had risen to almost 40 percent (National Center for Education Statistics, 2002). As the diversity of the population increases, it becomes more likely that SLPs will be asked to assess greater numbers of children who speak a language other than English (Laing & Kamhi, 2003; Roseberry-McKibbin & Eicholtz, 1994).

The surge in the numbers of Hispanic individuals, in particular, has had a significant effect on the dramatic increase of minority students. Data from the most recent national census (US Bureau of the Census, 2000), indicate that Hispanics comprise the fastest growing minority population in the United States—having grown from about 9 percent in 1990, to about 13 percent in 2000.

Appropriate assessment has become a critical issue not only for bilingual students being assessed for speech-language pathology (SLP) services, but also for other special education categories (Correa & Heward, 2003). For such students, the assessment process has been called into question, especially in light of the fact that students from minority populations (especially Hispanics and African-Americans) are either disproportionately over-represented or under-represented in special education (Ortiz, 1997; Valdez, 2003). For example, according to data cited by the National Center for Educational Statistics (2002), although close to 40% of the entire school-age population can be classified as minority, more than 50% of children who are identified as mild or moderately mentally impaired belong to a minority group. Current data indicate that close to 80% of Hispanic children referred for special education services are placed in learning disability (LD) and speech-language pathology (SLP) programs--both of which directly involve language proficiency and competence (Fletcher & Navarette, 2003; Oswald, Coutinho, Best, & Nguyen, 2001).

Several possible causes for this disparity have been cited in the literature. Burnett (2000) attributed the crisis to the national scarcity of qualified bilingual personnel and the lack of appropriate assessment tools, but Ortiz and Garcia (1995) placed the blame on a broader set of causative factors, including:

.... the absence of guidelines and data which can be used to develop procedures which (a) help distinguish cultural or linguistic differences from disabilities, (b) yield a non-biased assessment, (c) assure due process in decision making, and (d) result in individualized education programs which help language-minority students with disabilities achieve their potential (p.147).

Also, most SLPs believe that they have not been trained to differentially determine whether the language problems many bilingual students experience stem from a language learning disability or from a language difference associated with typical second language acquisition (Hammer, Detwiler, Detwiler, Blood, & Qualls, 2004; Kritikos, 2003). As a result, many bilingual students may be misdiagnosed and misplaced in speech-language pathology programs with clinicians who are ill-equipped to address cultural and linguistic issues related to second language learning (Gersten & Woodward, 1994; Jitendra & Rohena-Diaz, 1996).

Non-biased assessment for students who are culturally and linguistically diverse has not been easy to attain despite a history of legislative and litigious action. As early as 1964, Title IV of the Civil Rights Act required that language assessment of children with limited English proficiency be conducted in both the native language and English. This principle was subsequently reaffirmed by both Section 504 of the Rehabilitation Act of 1973 and the Education for All Handicapped Children Act of 1974 (subsequently renamed the Individuals with Disabilities Education Act (IDEA) in 1990). The latest (1997) IDEA amendments revisited the issue by specifying that assessment for the purpose of identifying and placing children with disabilities should conform to several specific criteria, including being (a) conducted in the child's native language, if feasible, (b) selected so as not to be racially or culturally discriminatory, (c) focused on the child's disability, not English language skills, (d) validated for the purposes for which it is used, and (e) administered by trained and knowledgeable personnel (Section 300.352).

There is no doubt that qualitative changes are needed in the assessment of bilingual students suspected of language learning disabilities. Traditionally, formal standardized (norm-referenced) procedures have been used to assess the language and academic performance of children suspected of having language impairments, but these procedures are limited in their effectiveness with populations from minority cultures. School personnel typically involved in the process of language assessment and special education referral include school psychologists, and speech-language pathologists. But whereas explicit data are available regarding school psychologists' assessment practices with bilingual children (e.g. Chaipetta-Baumgardner, 1995; Haney & Evans, 1999; Nuttall, 1987; McCloskey & Athanasiou, 2000; Ochoa, Powell, & Robles-Pina, 1996), only limited information exists about the role of the speech-language pathologist (SLP) in the assessment and identification of bilingual children referred for special education and/or speech-language services. Moreover, the literature is devoid of data describing how the assessment practices used with monolingual English-speaking students compare to those used with bilingual students. Given that there may be a dearth of evidence-based practice among SLPs in school settings (Apel, 2001), more information is needed regarding how closely the assessment practices of SLPs in Michigan conform to (a) IDEA regulations, (b) recommended practice guidelines of the American Speech-Language Hearing Association (ASHA), and (c) selected state educational agencies with high percentages of English Language Learners.

Statement of the Problem

The appropriate assessment of children who are linguistically different continues to pose a major challenge to school-based speech-language pathologists who are often expected to have the skills and tools for determining whether the language problems of bilingual children are due to a communication *difference* or a communication *disorder* (Ortiz, 1997). Recent census data confirm that Hispanics now represent the largest minority group in the United States. As this trend continues, Hispanics may comprise 1 in 3 school-aged children by the year 2020 (U.S. Bureau of the Census, 2002).

There is no doubt that accurate assessment is crucial to appropriate intervention. Misdiagnosis based on language differences places assessment in a critical position. Not only can misdiagnosis result in the overrepresentation of language-minority students in special education programs, but students from language minority groups can also be under-diagnosed and ignored by school personnel who admit to being ill-equipped to, and unprepared for, testing bilingual children (Figueroa, 1989; Hammer et al., 2004; Kritikos, 2003).

In their attempts to provide appropriate, nonbiased assessment to bilingual children, school-based SLPs are confronted with many obstacles. First and foremost, a significant percentage of SLPs admit to not being proficient enough in a language other than English to provide services to students who are bilingual (ASHA, 1995; Brice, 2002). Secondly, many SLPs have not received specific training in how to perform nonbiased bilingual assessments (Kritikos, 2003) and are thus neither competent nor

confident about the process. Thirdly, there is a critical shortage of norm-referenced assessment procedures in languages other than English (Kayser, 1995; Langdon & Cheng, 2002; Peña, Iglesias & Lidz, 2001); and finally, information is limited regarding the extent to which recommendations regarding bilingual assessment are being implemented.

It is now generally accepted that standardized language assessment procedures are incapable of providing accurate information regarding bilingual students' dual language competence. Growing numbers of researchers in the fields of special education and speech-language pathology (Burnette, 2000; Figueroa, 1989; Jitendra & Rohena-Diaz, 1996; & Ortiz, 1997) advocate the use of informal, non-traditional assessment procedures for identifying language disabilities in bilingual students. Proponents believe that such procedures are capable of (a) reducing the possibility of the linguistic and cultural biases with which traditional procedures are fraught, (b) providing information about the student's social and cultural context, and (c) more accurately differentiating between a language difference and a language disability.

Currently only scant information is available which describes and analyzes speech-language pathologists' assessment practices with bilingual children. Although a few recent studies (Eid, 1998; Galvan, 1997; Kritikos, 2003; Sanchez-Boyce, 2000) have addressed the issue of bilingual language assessment, none provides an analysis of the assessment procedures used in current practice. Besides, none specifically compares SLPs' performance with either (a) current IDEA regulations, (b) recommendations from

State educational agencies, or (c) recommendations from ASHA's guidelines and statements.

Purpose of the Study

This study proposes to fill a gap in the literature regarding (a) the specific assessment practices (formal and informal) of school-based SLPs with monolingual children; (b) the specific assessment practices (formal and informal) of school-based SLPs with bilingual and English language learners, (c) the factors that may enhance or inhibit SLPs' ability to conform to recommended practice guidelines, and (d) whether SLPs' assessment practices with bilingual children mirror published recommendations for preferred practice in bilingual assessment in the speech-language pathology literature.

This study will therefore address the following questions:

1. Which assessment procedures do SLPs use most frequently to test (a) monolingual English-speaking children, and (b) bilingual children, suspected of having language disabilities?
2. To what extent are the types of assessment procedures used by SLPs to evaluate bilingual children different from those they use with monolingual English-speaking children?
3. What are SLPs' perceptions regarding the adequacy of their language proficiency and professional training with regards to language assessment of bilingual children?

4. What specific factors affect SLPs' use of recommended assessment practices with bilingual students?
5. Do SLPs' perceptions regarding the importance of obtaining selected types of bilingual assessment information influence their use of recommended assessment practices with bilingual students?

CHAPTER II

REVIEW OF THE LITERATURE

The following review of the literature summarizes the research in the fields of speech-language pathology and bilingual special education for the purpose of identifying assessment issues and practices relevant to SLPs employed in public school settings. The areas to be specifically addressed are: (a) Types of language assessment procedures used by SLPs; (b) recommended practices for authentic bilingual assessment as described in the literature; and (c) status of bilingual assessment practices among SLPs.

Types of Language Assessment Approaches

Paul (2001) identifies four basic categories of language assessment procedures typically employed by speech-language pathologists (SLPs). These are: (a) norm referenced or standardized tests, (b) non-standardized or criterion-referenced procedures, (c) developmental scales and checklists, and (d) behavioral observations, including language sampling analysis. Of the four procedures cited above, traditionally, clinicians have relied primarily on the first two types (standardized, norm-referenced, and criterion-referenced tests) for assessing children's language performance (Ruscello, 2001). The other two types (developmental scales and behavioral observations) have typically been classified as alternative procedures (Losardo & Notari-Syverson, 2001).

Traditional Approaches to Language Assessment

Standardized Norm-Referenced Procedures

Norm-referenced procedures are designed to provide information on how a child's language is developing relative to information obtained from larger groups of children with normal language development, in order to make meaningful comparisons based on the child's performance (Owens, 1999). To be authentic, tests must demonstrate the presence of certain characteristics such as good reliability and validity, representativeness with regard to the test's norming sample, and a uniform set of instructions for administering and scoring (Paul, 2001).

While standardized, norm-referenced procedures may be useful for identifying language deficits in certain populations, these traditional assessment procedures have proven inadequate and problematic for culturally and linguistically diverse (CLD) populations (Losardo & Notari-Syverson, 2001). First and foremost, the majority of these tests have been normed in English with predominantly monolingual English speakers. For this reason, standardized/norm-referenced procedures, when employed with bilingual Spanish-speaking children, usually involve testing primarily in English, are norm-referenced on monolingual English speakers, and are incapable of assessing the student's relative English and native language proficiency (Bernstein & Tiegerman-Farber, 2002; Brice, 2002). Jitendra ND Rohena-Diaz (1996), in their discussion of limitations of traditional 'discrete point' language assessment procedures, categorized such tests as "spurious, decontextualized, inadequate, instructionally aloof and thus

unsuitable for making decisions regarding eligibility, placement, and instructional decision making” (p. 45).

Other problems inherent in standardized testing have been well-documented and usually involve content bias, linguistic bias and the reality of disproportionate representation of CLD children in normative samples (Brice, 2002). In terms of content bias, research has shown that differences observed in the performance of children from CLD backgrounds may more likely be reflective of variations in cultural practice and communication style than of a language disability (Gersten & Woodward, 1994; Restrepo & Silverman, 2001). Content bias is evident when the test’s stimuli and methods reflect concepts and vocabulary used in the mainstream culture, thereby assuming that all children have been exposed to similar life experiences (Laing & Kamhi, 2003). Thus, CLD children’s poorer performance on standardized language tests may be more reflective of differences in language experiences and cultural perspective than of a language disorder (Stockman, 2000).

Linguistic bias is another of the problems inherent in standardized tests. This type of bias occurs when there is a mismatch between the language used by the examiner and the child’s dominant language, or the language of the test itself versus the child’s dominant language (Langdon, 1989). This is especially true of bilingual children who have not yet acquired academic competence in English, or of bilingual clinicians whose dialect is different from that of the child’s. Linguistic and dialectal discrepancies in the examiner-child dyad may result in poor performance and erroneous labeling of language

differences as language disorders (McGinn, 2000). Attempts to reduce linguistic bias have resulted in either over- or under-identification of language disabilities. Over-identification results from the examiner interpreting linguistic differences as disorders, and under-identification occurs when the examiner assumes that differences seen are due to dialectical variations—when in fact they are errors (Laing & Kamhi, 2003).

Historically, standardized tests have included a disproportionate (insufficient) representation of CLD children in their normative samples (Coleman, 2000). In recent years, however, test developers have sought to include higher proportions of diverse populations in their sampling populations. For example, while earlier versions of the *Test of Language Development-Primary (TOLD-P)* included few Hispanics in their normative samples, recent versions include up to 10% Hispanics (Laing & Kamhi, 2003). However, it should be noted that even when minority populations are included in the norming sample, the percentages are so small that CLD children are still essentially being compared with their White middle-class peers (Saenz & Huer, 2003).

Umbel, Pearson, Fernandez, and Oller (1992), critiqued the issue of standardized bilingual assessment from both a practical and theoretical perspective. Practically, tests that are primarily developed for use in one language, do not translate consistently to another, and thus are difficult to score and interpret. Theoretically, the model of testing a bilingual child in a single language does not give the child credit for concepts known in both languages. In other words, monolingual models of testing seriously underestimate bilingual language skills. Thus, in the specific context of bilingual assessment,

standardized tests not only are inadequate in terms of reliability and norming, but also biased in their ability to provide information capable of distinguishing a language learning disability from a language difference (Ortiz, 1997).

Criterion-Referenced Procedures

Criterion-referenced procedures, on the other hand, compare the child's performance to an absolute standard using predetermined performance criteria. These types of procedures generally assess the child's ability to master specific tasks determined to be appropriate to the particular child and the particular context (Losardo & Notari-Syverson, 2001; Nelson, 1994; Ruscello, 2001).

In the context of language assessment, criterion-referenced procedures are capable of measuring performance on specific communication skills, syntactic structures or language concepts. Criterion-referenced procedures also provide the clinician with a greater degree of control, permitting the clinician to employ more familiar communicative patterns, design assessment materials and take into consideration the child's social context. As a result, much of the cultural and linguistic bias inherent in norm-referenced testing can be reduced or even eliminated (Wiig, 2000). Criterion-referenced procedures can also be employed for determining the child's response to instruction and measuring academic and linguistic progress (McCauley, 1996). Thus, this approach is both capable of providing information regarding appropriate instructional placement and describing the child's capacity to benefit from instruction (Losardo & Notari-Syverson, 2001).

Although criterion-referenced assessment is generally viewed as being less biased than norm-referenced testing for children who are culturally and linguistically diverse these procedures are only as valid as the comparison data being employed (Battle, 2002). The continued dearth of reliable research data in the area of bilingual language acquisition, poses a challenge to the clinician's well-meaning attempts "to set valid criteria for mastery of specific linguistic forms" (Laing & Kamhi, 2003, p. 46). Thus, although criterion-referenced assessment has the advantages of content flexibility and cultural sensitivity, these procedures, when used independently, are still limited in their ability to provide valid assessment information.

Modifications to Traditional Assessments

In spite of the range of limitations and criticisms associated with the use of norm- and criterion-referenced procedures, school-based SLPs are mandated by IDEA (1997) and its predecessors to employ standardized instruments as part of their language assessment battery. This mandate, however, only serves to further complicate the clinician's dilemma. For one thing, most speech-language pathologists are not proficient in a language other than English. According to ASHA's recent omnibus survey (ASHA, 2004), less than 10 percent of its members and certificate holders identify themselves as belonging to a racial or ethnic minority group. The situation is further complicated by the fact that there is limited availability of non-English assessment materials, including tests normed on speakers of other languages, or even translated instruments. Many clinicians

are therefore forced to comply with this regulation by resorting to one of two options:

The use of interpreters and/or the use of translated tests.

The use of interpreters. Monolingual clinicians who serve bilingual clients often seek out the services of an interpreter to assist with the assessment process. Several researchers in the field of bilingual assessment (Brice, 2002; Kayser, 1995; Langdon & Cheng, 2002) view this type of collaboration as a necessity, especially when the SLP does not share a common language with the student. Even bilingual SLPs may sometimes require interpreter services, since the possibility exists that as many as 100 languages may be spoken in a single community (Bracken & McCallum, 2001). Thus, the languages spoken by the bilingual SLP may not necessarily match the ones spoken by the student.

ASHA's (1989) position statement both sanctions and encourages the use of interpreters, but cautions that individuals selected to perform these functions should be both carefully chosen and rigorously trained. Several problems related to the role of interpreters in the assessment process have been cited in the literature. These include (a) poor quality interpreting resulting from a lack of proficiency in two languages; (b) absence of clear criteria and training guidelines for bilingual interpreting; (c) deficient content knowledge in the field of speech-language and hearing disorders; and (d) frequent failure of interpreters to demonstrate the qualities of neutrality, confidentiality, and honesty (Langdon & Cheng, 2002; Lopez & Rooney, 1997).

Sanchez-Boyce (2000), investigated the use of Spanish-speaking interpreters during special education assessment, and highlighted other risks specific to the assessment process itself. These risks included (a) unwarranted modifications to non-standardized procedures, (b) significant departures from the administration protocols of standardized tests; and (c) role-shifting of interpreters during a single assessment session.

In summary, the literature describing 'best practices' for interpreter participation concur that interpreters should be not only familiar with the child's language and culture but also trained in the area of speech-language development (Bernstein & Tigerman-Farber, 2002). Other general skills that interpreters should possess include, (a) literacy in both English and the second language, (b) knowledge of professional terminology, (c) an understanding of the rationale for testing, and (d) the ability to maintain confidentiality (Brice, 2002; Kayser, 1995). Lopez & Rooney (1997) further warn that the use of family members (though convenient) should be avoided, since their use may introduce unnecessary conflict and bias to the assessment process.

Translated tests. The translation of norm-referenced standardized tests has been viewed as another way of compensating for the paucity of assessment instruments in other languages. Translated tests, however, do not result in assessment instruments suitable for generating authentic data. Firstly, merely translating a test does not change the fact that the child's cultural and linguistic affiliation was not part of the norming sample; neither does translation guarantee the cultural and linguistic relevance of the

test's content areas (Coleman, 2000; Langdon & Cheng, 2002). Kayser (1995) clearly affirms this position in the following statement:

The translation of tests is a simplistic attempt to test children, but it neglects complex variables such as culture, language, and children's experiences that allow children to perform at their maximum potential. (p. 258)

The problem is further compounded by the fact that few instruments exist in other languages, and of the few available, most are translated versions of English tests. Such translations often contain items that are (a) culturally inappropriate, (b) linguistically incorrect, or (c) contextually irrelevant (Jackson-Maldonado, 1999).

Many researchers ((Baca & de Valenzuela, 1994; Barrera, 1995; Burnette, 2000; Laing & Kamhi, 2003; McGinn, 2001; Ortiz & Garcia, 1995) now suggest that supplementing traditional forms of assessment with alternative assessment procedures and techniques may be the solution to the bilingual language assessment dilemma faced by many school-based speech-language pathologists.

Alternative Approaches to Language Assessment

The research literature contains a variety of terms referring to non-standardized assessment approaches. These include (a) "naturalistic assessment" (Baca, 1990; Losardo & Notari-Syverson, 2001), (b) "alternative assessment" and "criterion-referenced assessment" (Ruiz, 1995), (c) "informal assessment" (Burnett, 2000); and (d) "non-psychometric or non-standardized assessment" (Bernstein & Tigermann-Faber, 2002; Baca, 1990). In this study, the terms informal and alternative are used interchangeably when referring to non-standardized, descriptive assessment procedures.

The “non-standardized” nature of these approaches has given rise to a quantity and variety of procedures that are virtually unlimited. However, the three most frequently cited alternative approaches in the bilingual special education and speech-language pathology literature, (a) descriptive, (b) dynamic, and (c) curriculum-based approaches, will comprise the categories addressed in this review (Cline, 1998; Jitendra & Rohena-Diaz, 1996; Olswang & Bain, 1996).

For purposes of specificity, the broad category of descriptive approaches is further subdivided to accommodate two types of descriptive language assessment procedures: (a) language sample analysis, and (b) observational/rating scales. What follows is a definition and description of each of these approaches as outlined in the literature.

Descriptive Approaches

The goal of the descriptive assessment approach to bilingual assessment, as articulated by Damico (1991), is to “collect data that are meaning-based and integrative” (p.179). Thus this approach (frequently referred to as a ‘naturalistic’ approach) aims to describe and analyze communication as it occurs across languages, in a variety of naturalistic contexts and interactive partners. In the context of bilingual assessment, this approach is not only capable of assessing both native and second language competence, but also useful for providing information on the individual’s relative language proficiency (Jitendra, Diaz & Nolet, 1998).

Procedures employed by this naturalistic approach are numerous, highly individualized, and varied. In the area of language assessment, three main types of

descriptive approaches predominate: (a) language sampling procedures, (b) rating scales and interviews, and (c) direct observation. In this paper, studies employing descriptive approaches are re-grouped and sub-classified according to two areas only: (a) elicited and spontaneous language sampling, and (b) ethnographic interviewing/observational and rating scales.

Language sampling. The use of language sample analysis as part of the assessment protocol is a well-accepted practice among speech-language pathologists (Beck, 1995; Ruscello, 2001). Language sampling enables the examiner to obtain information not only about the content of language, but also its context (Brice, 2002).

To ensure the validity of language sampling procedures, the examiner must ensure that several criteria are met. These criteria include (a) sample representativeness, and (b) language context diversity (Owens, 1999). To ensure representativeness, the sample “should be collected in a setting that is as familiar to the child as possible, with materials that prompt verbal exchanges” (Ruscello, 2001, p. 82). Owens (1999) states that representativeness can only be achieved if the interaction between child and adult is real, spontaneous, and child-oriented.

Language samples generally follow two basic formats: conversational or narrative (Brice, 2002; Miller, 1981). Conversational samples generally take place in the context of meaningful activities and materials that allow for a variety of conversational exchanges. For example, Langdon (1999) collected language samples in both Spanish and English during play activities. Narrative samples, on the other hand, are designed to

elicit a sample of the child's connected speech in a story-telling or event-recall task. Usually a conversational or narrative sample of 75-100 utterances, requires a time commitment of only 15-20 minutes, and is sufficient for basic language analysis (Ruscello, 2001; Schery & Garber, 1998).

Although recent literature in the area of language assessment suggests that language sampling procedures can serve as valid alternatives to traditional testing for bilingual children (Kayser, 1989; Restrepo, 1998), there is a lack of clear criteria by which bilingual children's language performance can be compared and measured. Specifically, there is neither sufficient reliable data with which bilingual children's performance can be compared, nor is there information about whether information obtained during language sampling is capable of assisting the clinician in differentiating between a language disorder and a language difference (Guitierrez-Ciellen, Restrepo, Bedore, Peña & Anderson, 2000).

Brice (2002) provides some suggestions regarding the use language sampling with bilingual children. Some of these include: (a) collecting both narrative and conversational samples, and (b) collecting them in both languages. It is also possible to obtain varying types of information by means of language sampling. Several experimental studies describing research conducted with Spanish-speaking subjects, investigated the use of specific grammatical structures in bilingual children suspected of having language disabilities. Some of these included (a) the use of grammatical morphology (Bedore & Leonard, 2001); (b) acquisition of definite articles and noun

agreement (Eng & O'Connor, 2000; Restrepo & Guiterrez-Clellen, 2001), and (c) general grammatical characteristics (Restrepo & Kruth, 2000).

Language sampling procedures also assess children's narrative or story-telling abilities. For example, Goldstein, Harris, & Klien (2001) employed a standardized story retell task with four-scene cue cards to elicit students' narratives, and Guittierrez-Clellen (2002) analyzed syntactic complexity in spontaneous narratives of bilingual children.

Many of the studies (Bedore & Leonard, 2001; Eng & O'Connor, 2000; Restrepo & Guittierrez-Clellen, 2001) involving language sampling, focused on analyzing and comparing specific aspects of subjects' linguistic competence, generally syntactic or grammatical structures such as article use, article + noun agreement, morphosyntactic structures, and grammatical morphemes. Along with obtaining information on language form, "language samples and story telling procedures can [also] be used effectively to establish a relative language proficiency profile" (Barrera, 1995, p.8). Langdon (1999), in her description of the methodology she follows in order to determine whether Spanish-speaking children do indeed have language disorders, highlights sampling in both English and Spanish, as her primary tool. However, the majority of clinicians and researchers reporting language sample use in the literature admit to obtaining samples in either English or the child's native language (not both). Thus, information on subjects' relative language abilities in both the first and second languages is not always obtainable by this method.

Rating scales and interviews. Rating scales and interviews have traditionally been used by clinicians to gather information about the child that is not readily obtainable in the clinic setting. Rating scales generally refer to checklist-type instruments that depend on third-party informants for providing relevant data. It is also possible to obtain a wealth of *language-related* information through (a) direct observation of language functions, and (b) parent and teacher interviews. Both of these procedures allow the assessment to take place in naturalistic contexts and involve individuals (e.g. parents, siblings, and teachers) who interact with the child regularly and naturally. Although Ruscello (2001) described observation as “the most critical aspect of assessment” (p. 80), he warned that valid observation as a means of inquiry involves much more than the mere observance of children’s language behavior during play and conversational interactions.

The value of ethnographic observations in the assessment of bilingual students cannot be overstated (Restrepo, 1998; Wiig, 2000). Jackson-Maldonado (1999) in her study on the early language assessment of bilingual students, concluded that “early language should be assessedusing different observational techniques” (p. 45) including direct observation of the child in a variety of environments.

Ecobiological interviews operate on the premise that individuals who interact with the child on a regular basis are the most credible sources of information regarding both the child’s language difficulties and communicative strengths (Losardo & Notari-Syverson, 2001). Interview informants may include any of the following--teachers, parents, family members or peers. In the context of bilingual language assessment, more

research has been done with parent informants than with any other type, since parents are generally viewed as the most credible source of information about their children's language skills (Brice, 2002). In two recent studies (Restrepo, 1998; Restrepo & Silverman, 2001), researchers determined that parent concern as one of the best identifiers of children's language proficiency and impairment. Other researchers (Gonzales, 1994; Patterson, 1998; Patterson, 2000; Thal, Jackson-Maldonado & Acosta, 2000) also successfully utilized parent reports as valid sources of assessment information when used in combination with other procedures.

Dynamic Assessment

The concept of dynamic assessment was initially described by Vygotsky as part of his model of cognitive development. Vygotsky (1986) proposed that a child's knowledge develops within a "zone of proximal development" (ZPD), as experiences are mediated and shared with more capable partners. In the context of language assessment, dynamic assessment can be defined as "an instructionally-oriented model of assessment that serves the dual purpose of accurately identifying a student's instructional language needs and planning instruction" (Jitendra, Rohena-Diaz, & Nolet, 1998, p.182).

Assessment procedures most frequently used for the dynamic assessment of language include (a) testing-the-limits, (b) graduated-prompting and (c) test-teach-retest. All dynamic assessment approaches "incorporate a learning component into the testing situation and examine the learner's responsiveness to teaching" (Jitendra, Rohena-Diaz, & Nolet, 1998, p. 182). Whereas testing-the-limits and graduated-prompting approaches

are useful for determining readiness for, and progress in, intervention, test-teach-retest procedures are better suited for distinguishing language differences from language learning disabilities (Guitierrez-Clellen, & Peña, 2001).

Test-teach-retest procedures are designed to test children's learning potential by providing them with mediated learning experiences (MLE) following initial testing and then retesting at the end of instruction. The idea is that a child with a typical language-learning system (or without a disability) will be able to benefit immediately from instruction, whereas the student with a disability will have difficulty learning even when explicit instruction is provided.

Very few studies address the issue of the dynamic assessment of bilingual children's language competence. Of the limited literature that exists, many of the articles (Butler, 1997; Guitierrez-Clellen, & Peña (2001); Jitendra & Rohena-Diaz, 1996; Jitendra, Rohena-Diaz & Nolet, 1998) are opinion-based, literature review-type documents that focus on the strengths and advantages of dynamic assessment (DA) over more traditional standardized testing. Both of Jitendra's articles employed hypothetical case studies as a means of illustrating the ideal dynamic assessment process. In both articles, subjects for the case study were 8 to 10-year old males of Puerto Rican descent for whom Spanish was considered the home language. These studies demonstrated the ability of DA to effectively differentiate between language disability and linguistic differences. Although Butler's tutorial did not employ the case study approach, she also

discussed the benefits of employing DA methods for testing children who are culturally and linguistically diverse.

Experimental studies done by Peña and her associates (Lidz & Peña, 1996; Peña, Quinn, & Iglesias, 1992; Peña, Iglesias, & Lidz, 2001) specifically address the validity of dynamic assessment as an alternative assessment measure for children who are culturally and/or linguistically diverse. For example, Peña, Quinn, and Iglesias (1992) were the first to apply a dynamic assessment model to the diagnosis of communication disorders in linguistically diverse children. Their early study utilized a test-teach-retest approach with Puerto Rican and African American preschoolers. Based on an analysis of pre-test versus post-test scores obtained on the Expressive One Word Picture Vocabulary Test (EOWPVT), researchers were able to differentiate children with normal language abilities from those with language disorders.

Lidz and Peña (1996) used a case study approach to demonstrate the application of dynamic assessment to the evaluation of Spanish-speaking preschool children. The two children in their study were first assessed in Spanish and received a similar score on the EOWPVT. However, their posttest scores following two 20-minute mediation sessions, produced dramatically different results—with one child being diagnosed as language delayed and the other being categorized as a normal language learner. Lidz and Peña conclude, that pretest scores alone, provide very “little insight into learning and language functioning” (p. 371) of linguistically diverse children.

Other studies of Dynamic Assessment (Masseti, 2002; Ukrainetz, Harpell, Walsh & Coyle, 2000) also utilized preschool-aged children, enrolled in Headstart or kindergarten programs. These experimental studies (a) employed standardized tests for the pre-test portion of the assessment protocol, (b) utilized or supported a test-teach-test design that included a mediated learning experience (MLE), and (c) exposed children to tasks that were similar (but not identical) to tasks presented during the pretest. Because most of the subjects were bilingual, responses were accepted in both English and Spanish. Results of all three studies indicated that DA was capable of not only distinguishing a language difference from a language disorder, but also differentiating language learning differences among children exposed to mediated instruction.

In summary, the review of the literature in the area of bilingual assessment indicates that the dynamic assessment approach is capable of (a) assessing bilingual children at risk for learning disorders, (b) evaluating more than one component of language, (c) addressing issues of language dominance and proficiency, and (d) providing relevant intervention information with reference to the child's learning style.

In spite of its indisputable strengths, dynamic assessment has not been frequently or easily utilized by SLPs. Losardo and Notary-Syverson (2001), include the following mitigating factors in their list of limitations: (a) Reduced efficiency related to the outlay of time necessary to adequately perform the assessment; (b) examiner incompetence related to the limited number of graduate programs that include dynamic assessment

training in their curricula; and (c) limited practicality of the approach in itself related to difficulties in generalizing research methodologies to the clinical context.

Curriculum-Based Language Assessment (CBLA)

Curriculum-based language assessment procedures are designed to first identify the areas within the curriculum where language-related problems are most likely to occur, and then to assess language performance using the context and content of the curriculum. Contrary to popular notions, the term ‘curriculum’ is not limited to the design of specific academic courses. Nelson (1994) broadly defines curriculum as “the variety of things children are expected to learn in school to become successful, independent citizens” (p. 105).

Nelson’s description of the six kinds of curricula most often observed in schools includes both explicit academic-related types of curricula and the more implicit, subtle types related to social expectation and communicative interaction. These are (a) the official curriculum defined by school districts; (b) the cultural curriculum dictated by the unspoken expectations of the mainstream culture; (c) the de facto curriculum governed by textbook selection in individual schools/classrooms; (d) the school culture curriculum determined by both the stated and the unstated rules that determine acceptable classroom behavior; (e) the hidden curriculum controlled by teachers’ conscious or unconscious values for desirable or undesirable classroom behavior; and (f) the underground curriculum dictated by peer-determined rules about acceptable and unacceptable age-appropriate social behaviors.

Curriculum-based *language* assessment (CBLA) is distinctly different from more generalized curriculum-based assessment (CBA) or curriculum-based measurement (CBM) which seeks to determine the student's instructional needs through an analysis of the local curriculum. In contrast, CBLA looks at the types of language skills and strategies the student uses during all school-related communication breakdowns, assesses their effectiveness, and then determines the types of curricular and student adaptations that may be necessary to communicative success (Nelson, 1994; Schoenbrodt, Kumin, & Sloan, 1997). Baca and de Valenzuela (1994) go so far as to posit that CBLA, which employs "criterion-referenced, informal and teacher-made devices" should be "the first step" (p. 5) in the assessment process of bilingual children with disabilities. This information, they believe, is crucial to the appropriate instructional placement of the student.

The application of CBLA approaches to the language assessment of bilingual students has not received extensive coverage in the literature. However, available research indicates that CBLA approaches may be capable of providing information in a variety of language-related curricular areas. These include: (a) reading comprehension and fluency (Baker & Good, 1994), (b) language arts activities based on story passages (Duran & Szymanski, 1994), (c) Head Start curricular-based vocabulary (Steffani, 1993), and (d) storybook writing (Ruiz, 1995).

In addition to assessing specific curricular areas, CBLA approaches may also be used to assess the child's instructional context. For example, Ruiz (1995) utilized

classroom-based observation as a means of determining the validity of the theory that the performance of children in special education is affected by their interactional or instructional contexts. CBLA methods therefore have the capacity of not only assessing the child in his learning environment but on assessing the learning environment itself (Cline, 1998).

Two disadvantages of curriculum-based language approaches include (a) the significant time outlay that its implementation requires, and (b) high level of expertise and skill which are too required effectively analyze both the curriculum and the child's dialogue exchanges (Losardo & Notari-Syverson (2001).

Recommended Practices in Bilingual Assessment

Within the last decade, researchers in the fields of bilingual special education, limited English proficiency programs, and speech-language pathology (Baca, 1994; Barrera, 1995; Brice, 2002; Burnette, 2000; Jitendra, Rohena-Diaz, & Nolet, 1998; Kayser, 1995; Ortiz & Garcia, 1995) have proffered a number of recommendations for conducting non-biased evaluations of bilingual children. These recommendations, culled from the literature, are organized into three main categories for ease of discussion: (a) Procedure-related recommendations, referring to types of assessment procedures most useful for this population; (b) methodology or practice-related recommendations, outlining under what conditions the assessment should be performed; and (c) product or outcome-related recommendations, specifying the types of information that accurate non-biased bilingual assessments should provide.

Recommended Procedures in Bilingual Assessment

It is generally accepted that static, standardized, quantitative, norm-referenced approaches have proven inadequate for addressing the diagnostic needs of children who are in the process of learning English. Several reasons have prompted this consensus. First, studies (Cummins, 1989; Pray, 2003) show that language minority students generally score lower than their monolingual peers on standardized tests. Secondly, most traditional language tests are normed in English, and are not representative of CLD children. Thirdly, children from low SES backgrounds, tend to score lower on standardized tests than do children from middle or upper class backgrounds (Stockman, 2000).

In the public school arena, the use of traditional, standardized procedures has persisted, despite the abundance of negative criticism in the literature. One reason for this persistence is the fact that many state and local educational agencies require the use of standard scores and percentiles to prove eligibility for services. Thus, although the contributions of standardized, norm-referenced procedures may be limited to screening and comparative diagnostic purposes only, speech and language clinicians have no choice but to utilize these measures as part of their assessment protocol (Saenz & Huer, 2003). Other factors, such as (a) the shortage of tests in languages other than English, (b) the variety of languages now spoken among public school students, and (c) the shortage of bilingual SLPs and interpreters, all combine to create an environment in which standardized testing continues to be used with CLD students. Other experts insist that

although standardized measures may be incapable of differential diagnosis in CLD students, they are useful for indicating whether their language skills are comparable to those of mainstream children (Laing & Kamhi, 2003).

There are over 150 standardized, norm-referenced procedures available to speech-language pathologists who work with children (Beck, 1995). However, “there is a small core of highly used instruments that clinicians tend to rely on at any one point in time” (Haynes & Pindzola, 1998). Wilson, Blackmon, Hall, and Eicholtz (1991) in their study of California-based SLPs, found that most SLPs utilize a small core of only 4-6 instruments on a regular basis.

Along with the expediency of using standardized procedures, numerous studies recommend a variety of alternative procedures for measuring the language abilities of children who speak a language other than English. These procedures (which are discussed at length earlier in this chapter) include: (a) descriptive assessment, including language sampling, interviewing, and observational/rating scales (Restrepo, 1998; Wiig, 2000; (b) dynamic assessment (Brice, 2002; Guitierrez-Clellen & Peña, 2001; Jitendra & Rohena-Diaz, 1996; Peña & Quinn, 1997); (c) curriculum-based assessment (Battle, 2002; Laing & Kamhi, 2003; Nelson, 1994).

Recommended Practices in Bilingual Assessment

Many professional, federal, and state educational agencies have provided recommendation for the preferred conditions under which accurate, non-biased assessment should occur for all children—including bilingual and English language

learners. Some of these include the (a) the Individuals with Disabilities Education Act (IDEA), (b) the American Speech Language-Hearing Association (ASHA), (c) the Educational Resources Information Center (ERIC) Clearinghouse on Disabilities and Gifted Education, and (d) various education agencies at the State level. The recommendations proffered by these agencies will be summarized below.

IDEA's Recommendations. IDEA (1997), and all its predecessors, include clear specifications on how children with suspected disabilities should be assessed. These include being (a) conducted in the child's native language, if feasible, (b) selected so as not to be racially or culturally discriminatory, (c) focused on measuring the child's disability, not the English language skills, (d) validated for the purposes for which it is used, and (e) administered by trained and knowledgeable personnel (Section 300.352).

IDEA further clarifies the process for determining eligibility and placement by stating that information regarding the child's performance should be gleaned from a "variety of sources, including parent input, teacher recommendations, ... social or cultural background and adaptive behavior (Sec. 300.535).

The Individuals with Disabilities Education Act (IDEA) Amendments of 1997 (PL 105-17) concur with the assertion that variety should characterize the assessment procedures employed with bilingual and monolingual children. Section 614 (b) (2) states that diagnosticians should "use a variety of assessment tools and strategies to gather relevant functional and developmental information". Secondly, non-biased bilingual assessment should glean information from a variety of sources, including a combination

of formal and informal approaches, and a variety of school home and community sources (IDEA, 1997; Kayser 1995). Finally, according to IDEA, procedures employed in the assessment process should be capable of assessing both the child's native language (L1) and the classroom language (L2).

Other researchers have provided support for IDEA's position. Ortiz & Garcia (1995) clearly state that "every language minority child referred to special education should receive a comprehensive language assessment in his or her native language and in English" (p. 475). Baca (1990) described the issue of 'English-only testing' of language minority students as perhaps the fundamental cause of minority over-representation in special education programs.

ASHA's Recommendations. ASHA's (1999) ad hoc committee on the roles and responsibilities of school-based speech-language pathologists has also addressed the specific issue of assessment with monolingual and bilingual students. In the context of combining assessments from multiple sources, their recommendations read as follows:

Combining standardized (norm-referenced) with nonstandardized (descriptive) assessment using multiple methods will assure the collection of data that can furnish information about the student's functional communication abilities and needs (p. 20).

These guidelines also specifically address the issue of bilingual evaluations when they state that school-based SLPs should provide "a nonbiased assessment of communication function in both the first (native/home) and second language of the student (p. 29). This guideline closely mirrors IDEA's recommendation to provide assessment in the child's native language "unless it is clearly not feasible to do so" (IDEA, Section 612(a) (6) (B).

Similar to IDEA, ASHA's guidelines also recommend the settings and sources for obtaining adequate assessment data. In a list of the responsibilities related to assessing students from culturally and linguistically diverse backgrounds, ASHA recommends a comprehensive review of the student's "personal history, including cultural, linguistic, and family background" (p. 28). This information should emanate from a number of sources, including family members, teachers, bilingual professionals, and culturally matched paraprofessionals. According to the committee, assessing the child in varied settings would also ensure that a realistic picture of both academic and social language has been obtained.

ERIC's Recommendations. According to Crowley (2003), the accurate diagnosis of communication disorders in culturally and linguistically diverse (CLD) students is a challenge facing speech-language therapists in educational settings. To counteract and overcome this challenge, she described the "current preferred practice" in the assessment of CLD students. Crowley summarized her recommendations as follows:

1. Acquire comprehensive data regarding the child's exposure to languages other than English;
2. Gather data in a number of settings, covering different types of language;
3. Utilize parent and/or caregiver reports;
4. Obtain information from teacher interviews and portfolio/classwork reviews;
5. Gather data regarding the child's ability to learn through dynamic assessment methods.

In summary, Crowley's (2003) "preferred practice" recommendations also highlight the importance of incorporating varied, diverse methods and procedures when assessing children from linguistically diverse backgrounds. Although Crowley did not directly address the issue of assessment in the child's native language, she did caution that translated tests should not be used in the evaluation of English language learners.

Many state professional and educational agencies with high densities of CLD children have echoed Crowley's (2003) best practice guidelines for language assessment. For example the Texas speech-language hearing association (TSHA) summarized the aforementioned assessment guidelines in its document outlining best practices for assessment of ELL students in the schools, by stating:

Assessment should include and not be limited to: formal standardized normative and criterion referenced tests (in many languages), dynamic assessments, arena assessments, informal assessments and speech language observation (www.txsha.org/prof_issues/practices_draft.html)

Other state organizations with published guidelines which reiterate ASHA's and IDEA's recommendations include the Kyrene School District in Arizona, the California speech-language-hearing association (CASHA), the Hawaii office of instructional services, and the Illinois department of education.

Thus, the assessment recommendations from various organizations concur that assessment should be comprehensive. Specifically, bilingual language assessment procedures should provide in-depth information regarding language performance in a variety of contexts. According to Burnette (2000), a description of "in-depth performance" is based on whether the assessment measure allows the evaluator to obtain

descriptive information from a variety of sources, in a variety of environments. Burnette specified in her list of solutions and best practices, the principle of individualized assessment that takes into account not only the child, but also the environment. Burnett recommended that traditional instruments be combined with qualitative assessment procedures from a variety of sources (such as observations and interviews) and from a variety of settings (school, home, community).

Recommended Products in Bilingual Assessment

Appropriate language assessment should provide the evaluator with specific types of information (products). Information obtained during the assessment should indicate the student's (a) language dominance, (b) language proficiency, (c) language learning capacity, and (d) learning style.

Language dominance, as defined by Jitendra (1996), "is the language most often used by the student for communication and self-expression" (p.43). Ortiz (1997) expanded the concept when she described dominant language as:

the language the student: (a) first learned, (b) prefers to use, (c) consistently chooses to use when speaking with bilingual individuals who speak the same dialect, and/or (d) shows the greatest ease in using. It is also the language that seems to have a greater influence on the other language. (p. 43)

The assessment process should also provide information regarding the child's language proficiency. Language proficiency can be defined as the level of competency an individual demonstrates in a particular language (Kayser, 1995). Ortiz (1997) listed

four distinguishing characteristics of a language proficient individual as (a) the ability to understand messages even if distorted; (b) the ability to express meaning clearly; (c) the ability to adequately use language in a variety of settings; and (d) the ability to self-correct.

The products (results) of the specific informal assessment procedures should provide information regarding the child's ability to learn another language (language learning capacity) and the manner in which the child learns best (Jitendra, et al. 1998). A mere description of students' language performance is insufficient to provide adequate information for placement purposes. Outcomes should reflect the fact that effective assessment should always lead to appropriate intervention (Coleman, 2000). Figure 1 provides a graphic representation of the interaction between procedures, practices, and products.

Status of Bilingual Assessment Practices

Assessment Practices in the General Population

A few studies have surveyed the specific language assessment procedures used by SLPs in the general population (Beck, 1995; Wilson, Blackmon, Hall & Eicholtz, 1991). These studies did not focus on the language assessment of bilingual children, but on the procedures SLPs used to assess language disorders in English-speaking children. Wilson et al. surveyed 266 public school clinicians in the state of California in order to determine what types of language assessment procedures were being used, and the factors that influenced their selection. The study was limited, however, to clinicians who served

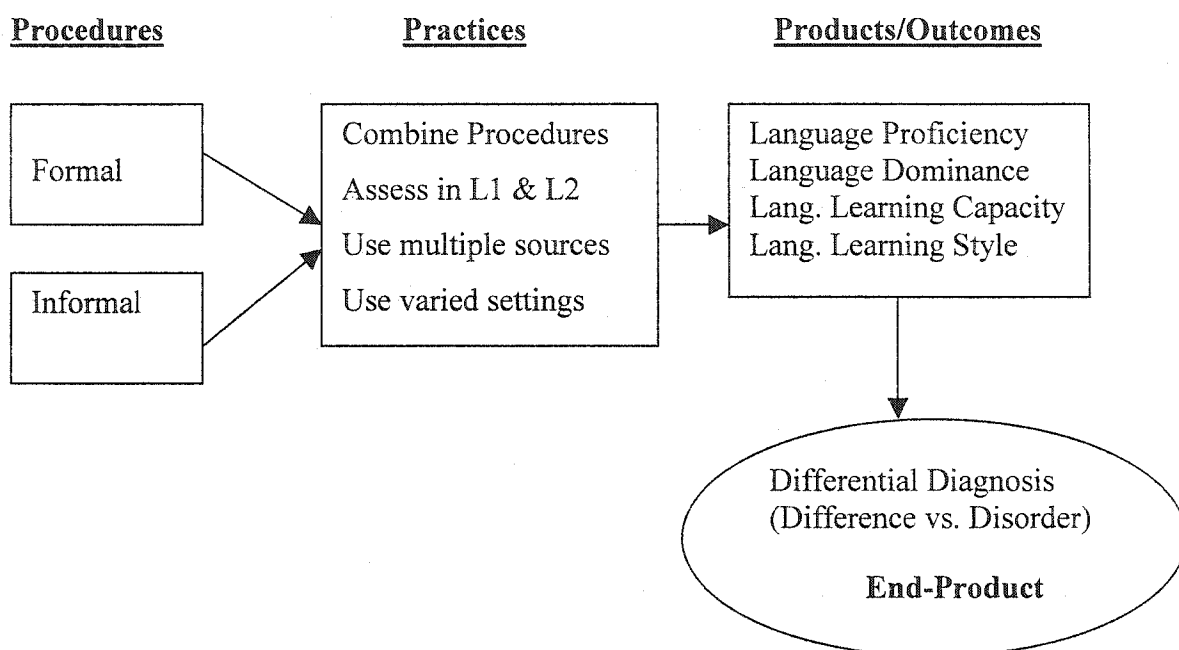


Figure 1. The Procedure-Practice-Product Model of Bilingual Assessment.

children between the ages of 4 to 9 years and did not address the issue of bilingual assessment. Findings indicated that the majority of SLPs use a combination of formal and informal procedures when assessing their students and that selection was influenced by a variety of factors, including (a) the knowledge and experience of the clinician, and (b) district and supervisor suggestions.

Four years later, this study was duplicated and expanded by Beck (1994) who investigated the language assessment practices of 326 school-based clinicians in the state of Illinois. Unlike Wilson and colleagues, Beck did not limit her study to public school clinicians, but included SLPs in other work settings such as hospitals, private practice and rehabilitation centers. Also, she expanded the age range of children with whom

clinicians worked to 18 years. This study compared methods of assessment used with three age groups of children: 3 to 5 year olds, 6 to 11 year olds, and 12 to 18 year olds.

The results of this study closely mirrored those of Wilson et al's (1991) in terms of the combined usage of formal and informal methods; however Beck's study also found that clinicians were generally not satisfied with the knowledge they obtained at their institutions, nor were they content with the opportunities for in-service training that were available to them. Information obtained in both studies produced indicated that SLPs chose from a limited set of 10 to 12 assessment procedures, and tended to rely more on formal assessment methods than on informal procedures.

In both of the previous studies, language sampling was the only alternative procedure which respondents reported to use frequently. A similar finding was reported by Hux (1993) as a result of his survey of 239 school-based speech-language pathologists. She found that SLPs routinely utilized language sampling procedures as a supplement to their standardized, formal testing procedures, and that they viewed the information they obtained as beneficial and relevant to their service delivery.

Surveys of School Related Personnel

Surveys of assessment practices of school related personnel also abound (Chaipetta-Baumgardner, 1995; Haney & Evans, 1999; Nuttall, 1987; McCloskey & Athanasiou, 2000; Ochoa, Powell, & Robles-Pina, 1996). For example, in a seminal study done by Ochoa et al. (1996), researchers collected comprehensive data on the assessment practices of school psychologists with bilingual and limited English proficient

(LEP) students. The study surveyed 959 school psychologists' nationwide and gathered data on the three assessment domains of intellectual, achievement, and adaptive behavior generally evaluated by school psychologists. This study analyzed information regarding the specific assessment procedures used, and then compared actual practice with recommended practice guidelines.

One limitation of the Ochoa et al. (1996) survey is that data were not collected regarding school psychologists' assessment practices with monolingual English speakers in the general population. However, the authors did compare their findings with previous studies (Stinnett, Havey, Oehler-Stinnett, 1994) on school psychologists' assessment practices with the general population. Findings indicated those school psychologists' used informal procedures (nonverbal and curriculum-based assessment) more frequently with bilingual students than with the general school population, and those school psychologists' assessment practices conformed generally to recommended practice guidelines. Information regarding the assessment practices of SLPs in similar settings is also needed.

Assessment Practices with Bilingual Students

Very few studies have used a survey design approach to investigate the assessment practices of SLPs with bilingual or limited-English-Proficient students. For example, all three of the studies done by Eid (1998), Galvan (1997), and Pulnik, (2001), used a case study approach to describe the practices of limited numbers of SLPs involved in the assessment of bilingual children. For example, the subjects in Eid's study were

one monolingual SLP and one bilingual SLP. Pulnik, on the other hand, observed 5 SLPs as they assessed 5 bilingual children and Galvan used the case study method to investigate the efficacy of two qualitative assessment approaches with 3 Mexican-American children. All of these studies produced findings which support the superior efficacy of alternative assessment approaches over traditional norm-referenced procedures.

Roseberry-McKibbin & Eicholtz (1994) conducted a national survey of 1,145 SLPs that focused specifically on the services that public school clinicians provide to children with limited English proficiency. Although the study did not focus on SLPs' *assessment* practices but on service delivery, findings were suggestive of deficient assessment practices among the SLPs surveyed. For example, 90 % of the respondents admitted to not being able to speak a second language fluently enough to provide services; and 76% indicated not having had previous training or coursework in the area of bilingual assessment and intervention. Other significant findings of the study include: (a) Spanish-speaking children are the most frequently served ethnic group served by SLPs; and (b) that the problems encountered most frequently by respondents centered around the lack of appropriate assessment measures and the their inability to speak another language.

These findings concur with those from an earlier study (Mattes, 1982) which surveyed 285 SLPs in the State of California. Mattes also investigated and described the process by which SLPs identified Spanish-Speaking children with speech and language

disorders. Results of Mattes' study indicated a critical shortage of bilingual SLPs but the regular use of bilingual aides and paraprofessionals to assist with language assessment and intervention. Given that the Mattes study was done in a state with a high proportion of Hispanic individuals, it is not surprising that his study differed with subsequent studies done in less diverse states where bilingual paraprofessional personnel were not as available.

Two recent survey research studies (Kritikos, 2003; Senaga & Inglebret, 2003) have specifically investigated issues regarding the assessment of bilingual students by SLPs. Kritikos, (2003) focused her study on the belief systems of 811 bilingual SLPs' from the states of New York, Texas, New Mexico, California, and Florida. Michigan was not included among the targeted states. The three groups of clinicians in this study (representing different language-learning contexts) responded to questions regarding their beliefs about the problems, solutions, and responsibilities of bilingual assessment. Findings indicated that not much has changed in the area of SLPs' bilingual assessment practices since the Wilson et al. (1991) study. Results showed that the majority of the SLPs surveyed by Kritikos neither felt competent to assess children who speak a language other than English, nor were confident about referring bilingual children for speech-language pathology services. Differences in personal efficacy, however, were evident based on the degree of the respondents' second language proficiency and the experience the clinicians had had with different languages and cultures. These findings

strongly suggest that bilingual individuals may be the victims of both underreferral and overreferral problems.

The purpose of the Senaga and Inglebret (2003) investigation of the assessment practices used by bilingual SLPs was to identify assessment tools and procedures used by bilingual SLPs during the assessment of Spanish-speaking children. Respondents were selected from the states of California, Idaho, Oregon, Washington, Nevada, and Arizona. Michigan was again excluded from this investigation. The study also sought to compare these procedures, with those used with English-speaking students. Prior to this study, only one other similar investigation had been attempted by Langdon (1989) who investigated the current practices of Spanish-speaking SLPs when assessing bilingual students. Langdon, at that time, documented a heavy emphasis on discrete-point testing, and very limited use of informal assessment procedures.

The Senaga and Inglebret (2003) questionnaire not only included 57 forced choice, open-ended, and demographic questions, but also two case studies of an English-speaking student and a primarily Spanish-speaking student. Respondents were asked to indicate the likelihood of their using various types of assessment procedures for each case. Results indicated that respondents used informal and formal assessment procedures with comparable frequency when assessing bilingual students and Spanish-speaking students. The most frequently used standardized test used was the Clinical Evaluation of Language Functions (CELF-3), while the most frequently used informal procedure was observation across multiple settings. This study's findings, though significant, were

limited to Spanish-speaking children, and bilingual SLPs. Hence information regarding the assessment practices of monolingual SLPs serving a linguistically varied clientele was not obtained.

Summary

Several assessment procedures and recommendations for practice are available to speech-language pathologists involved with assessing bilingual students. However, in the field of speech-language pathology there is a dearth of information regarding how SLPs employ these procedures, or implements available recommendations with regards to appropriate bilingual assessment. Previous studies have either investigated SLPs' use of language assessment practices with the general population or targeted bilingual SLPs' language assessment practices with Spanish-speaking children. Most of the studies targeted single states, and looked at those with high percentages of diversity (for example, California), but none of the previous studies have specifically focused on the practices on monolingual clinicians in low diversity states, such as Michigan. Although various guidelines and strategies have been described and outlined in the literature, little is known about the extent to which these recommendations are implemented. Further information is also needed about SLPs' beliefs regarding the efficacy of their graduate training, and their opinions regarding the importance of obtaining the types of information necessary for making informed diagnostic decisions. Information about the factors that may enhance or inhibit SLPs' ability to conform to recommended guidelines is also conspicuously absent from previous research.

Given the deficiencies in the literature, this study proposes to extend the existing research regarding SLPs' assessment practices and determine whether demographic, caseload or work-related variables influence their selection of assessment measures. The chapter which follows outlines the study's methodology.

CHAPTER III

RESEARCH METHODOLOGY

The purpose of this study was to identify the assessment procedures and practices of school-based speech-language pathologists (SLPs) employed in the state of Michigan. A survey method was used to gather information about the assessment procedures used by SLPs' for assessing the bilingual students', as well as for assessing monolingual English-speaking students. The survey also gathered information regarding perceptions about language proficiency and professional training. To further explore factors that might enhance or inhibit their use of recommended assessment practices, the study investigated the relationship between selected demographic, caseload, and work-setting variables, and the type of bilingual assessment methods most frequently employed. Finally, the relationship between SLPs' self-reported assessment practices, and their beliefs regarding the importance of selected bilingual assessment outcomes was described. This chapter describes the research design, hypotheses, subjects and procedures employed in this study.

Research Design

Data were collected via a self-administered questionnaire to a target group of 596 public school clinicians in the State of Michigan. The survey method was selected since the purpose of the study was to gather descriptive, exploratory information (Patten,

1998), about current assessment practices of public school clinicians in Michigan. Information obtained from the survey was therefore used to generate descriptive and inferential data regarding the distribution and prevalence of the types of assessment procedures used by the target group of speech-language pathologists (SLPs). The study also looked at the relationships between such characteristics as second language proficiency, years of experience, caseload size and composition, geographical location, specialized training and racial/ethnic background, and SLPs' self-reported assessment practices.

Hypotheses

The following research questions and hypotheses were generated based on the research questions that emerged from the statement of the problem, and the review of the literature. In order to facilitate the analysis of the data the hypotheses are presented in null form:

Research Question 1

What assessment procedures do SLPs use most frequently for assessing (a) monolingual English-only students, and (b) bilingual English-language learners?

Research Question 2

What types of assessment procedures (alternative versus formal) do SLPs use for assessing monolingual English-speaking students and bilingual and English language learners?

Research Question 3

What are SLPs' perceptions regarding the adequacy of their language proficiency, competence, and professional training with regards to language assessment of bilingual students?

Research Question 4

Is there a relationship between SLPs' demographic characteristics, and frequency of use of recommended assessment practices with bilingual students?

Hypothesis 1: There is no relationship between selected demographic variables (age, years of experience, racial or ethnic background, and second language proficiency), and frequency of use of recommended bilingual assessment practices.

Sub-hypothesis 1a: There is no relationship between age and frequency of use of recommended bilingual assessment practices.

Sub-hypothesis 1b: There is no relationship between SLP years of experience and frequency of use of recommended bilingual assessment practices.

Sub-hypothesis 1c: There is no relationship between racial or ethnic background and frequency of use of recommended bilingual assessment practices.

Sub-hypothesis 1d: There is no relationship between second language proficiency and frequency of use of recommended bilingual assessment practices.

Research Question 5

Is there a relationship between SLPs' education and training characteristics and frequency of use of recommended assessment methods with bilingual students?

Hypothesis 2: There is no relationship between SLPs' beliefs regarding the adequacy of their graduate education and training (adequacy of theoretical knowledge, and adequacy of practical experience), and frequency of use of recommended assessment practices.

Sub-hypothesis 2a: There is no relationship between SLPs' beliefs regarding their theoretical knowledge and frequency of use of recommended assessment practices.

Sub-hypothesis 2b: There is no relationship between SLPs' beliefs regarding their graduate practical experience, and frequency of use of recommended assessment practices.

Research Question 6

Is there a relationship between SLPs' work-setting characteristics and frequency of use of recommended assessment practices?

Hypothesis 3: There is no relationship between SLPs' work-setting characteristics (type of employment, type of school, and school geographic location), and frequency of use of recommended assessment practices.

Sub-hypothesis 3a: There is no difference among SLPs employed full time versus those employed part time in terms of their frequency of use of recommended assessment practices.

Sub-hypothesis 3b: There is no difference among SLPs employed at different school levels (pre-school, elementary, middle/junior high, and high), and the frequency with which they use recommended assessment practices.

Sub-hypothesis 3c: There is no difference among SLPs employed in different school geographic locations, and the frequency with which they use recommended assessment practices.

Research Question 7

Is there a relationship between SLPs' caseload characteristics and frequency of use of recommended assessment practices with bilingual students?

Hypothesis 4: There is no relationship between SLPs' caseload characteristics (caseload size, caseload diversity), and the frequency with which they use recommended assessment practices.

Sub-hypothesis 4a: There is no relationship between SLPs' caseload size and the frequency with which they use recommended assessment practices.

Sub-hypothesis 4b: There is no relationship between SLPs' caseload diversity and the frequency with which they use recommended assessment practices.

Research Question 8

Do SLPs' beliefs regarding bilingual assessment outcomes, influence their use of recommended assessment practices with bilingual students?

Hypothesis 5: There is no relationship between SLPs' beliefs regarding bilingual assessment outcomes, and the frequency with which they use recommended assessment practices.

Subjects

Subjects were selected from the 2003 mailing list of the Michigan Speech-Language-Hearing Association (MSHA). This mailing list consisted of ASHA-certified and/or teaching-certified SLPs in the State of Michigan who are members of MSHA. On request, this organization's mailing list is available free of charge to MSHA members who are affiliated with tertiary level educational institutions. The 1,012 individuals who are currently MSHA members represent a cross-section of work settings, including public school, medical, private practice and university teaching. More than 50% of MSHA members (601) are categorized as public school or school-based speech-language pathologists, having met the criteria of (a) current ASHA/Teacher certification, and (b) public school employment in the State of Michigan.

In order to select the target group of study participants, a second list of names was obtained for MSHA members who self-identified as public school clinicians. By cross referencing this list with the original list of 1, 012 SLPs with membership in MSHA, and selecting only those with current Michigan addresses, 596 public school clinicians were identified to participate in the study.

Procedures

Instrumentation

The data were collected through the development of a survey instrument entitled “Work and Well-being of Speech-Language Pathologists.” This survey is part of a larger study conducted in collaboration with David Williams at the University of Michigan, and gathered data regarding SLPs’ language assessment practices and their perceptions of well-being. For this study, only the sections of the survey pertaining to SLPs’ work and training were analyzed.

Before deciding on specific work-related questions to be included in questionnaire, survey instruments from studies related to SLPs’ assessment practices were examined. Many of the questions in the instrument related to the present study, were adapted and modified from instruments used in five similar studies by Beck, (1995); Kritikos, (2003); Mattes, (1982); Ochoa, (1996); and Wilson, Blackmon, Hall, and Eicholtz, (1991). Although the Wilson et al. and Beck studies employed the survey method to gather information on school-based SLPs’ language assessment methods for different *age* groups, their survey instruments did not provide information regarding assessment practices used specifically with bilingual students. Ochoa, on the other hand, did focus on these two student populations, but his study surveyed school psychologists’ (not SLPs’) assessment practices with bilingual students. Both Kritikos and Mathes surveyed SLPs regarding their assessment of bilingual children. However, Kritikos gathered data about SLPs’ beliefs about bilingual language assessment, and Mathes’

about SLPs' qualifications for administering Spanish procedures, and the availability of Spanish tests. The questions in the instrument used in this study were formulated based on modifications of these previous surveys in order to address the specific research questions and hypotheses of this study.

A double sided, four-sheet questionnaire, divided into six sections was developed to collect data in the following areas: Section 1: Clinician background and work setting; Section 2: Caseload composition; Section 3: Language proficiency and training; Section 4: Assessment procedures and practice (including types of assessment procedures and self-reported assessment practices); Section 5: Health and stress; and Section 6: Demographic characteristics. David Williams, a collaborating researcher at the University of Michigan was completely responsible for questions 11 to 13 in Section 1, and all the questions in Section 5 of the instrument. Data from these sections were not utilized in the current study.

The questionnaire included questions that were designed to generate descriptions of assessment procedures and practices SLPs used with monolingual English speakers and bilingual English language learners. The questionnaire also solicited respondents' perceptions regarding their language proficiency and adequacy of graduate education. Items related to 'preferred practice' were obtained from IDEA and ASHA guidelines, and also from a review of the literature in the areas of bilingual education and speech-language pathology. Question formats included open-ended completions, listings, forced-type alternatives, and 4-point rating scales.

The initial draft of the survey questions used in this study was pilot tested on a sample of the population (n=15) who self-identified as practicing public school clinicians in the states of New York, Texas, and Illinois. Respondents were asked to provide feedback regarding the survey's form, presentation, and clarity. Respondents were also asked to indicate how much time was required to respond to the survey's questions. Based on their comments and feedback, the instrument was modified for form, presentation and linguistic clarity.

Reliability and Validity of the Instrument

Content validity, defined as a subjective measure of how appropriate the items appear to individuals who are knowledgeable of the subject matter (Litwin, 1995), was obtained by having three (n=3) bilingual school-based SLPs critique and review the survey. Along with the survey, respondents were provided with a rating form that not only requested their feedback on form and clarity, but also the appropriateness and clinical relevance of the survey items. Adjustments were made based on the input of these 'experts'. Responses on the pilot surveys also served to confirm the study's validity.

Reliability, on the other hand, is a statistical measure of how reproducible results obtained from a particular instrument is capable of being (Fink, 1995). A measure of the internal consistency reliability of this instrument was done so as to determine how well different items in the survey measured the same construct. A Cronbach's Alpha coefficient was used to measure the internal consistency of selected items in Section 4 of

the survey, particularly questions 23, 27 & 28. Data for this analysis were obtained from the 15 pilot surveys. Results yielded a coefficient alpha of .78, suggesting acceptable reliability of the questions analyzed.

Data Collection

Data collection for this study was carried out as a research partnership between Western Michigan University (WMU), and the University of Michigan's Institute for Social Research (ISR). The University of Michigan (U of M) coordinated the formatting, mailing, and collection of questionnaires, the doctoral student at Western Michigan University was responsible for all data coding, data input, data analysis and interpretation utilized in this study. The University of Michigan also funded the cost of the incentive (a \$2.00 bill) attached to each questionnaire.

After obtaining the necessary approvals from the human subjects review boards (HSIRBs) at both universities, questionnaires were mailed to each clinician in November 2003. The mailing procedures conformed to Dillman's Total Design Method for Mail Surveys (Dillman, 1978). Each prospective participant was mailed a packet consisting of (a) the questionnaire with an attached incentive (a \$2.00 bill), (b) a cover letter, and (c) a stamped, self-addressed return envelope. One week after the initial mailing, a reminder notice in the form of a post card, was mailed to prospective participants who had not returned the initial questionnaire, requesting the participants to return their questionnaires if they had not already done so. A second follow-up, in the form of a letter and a

replacement questionnaire, was mailed to non-respondents three weeks after the original questionnaires were mailed.

Data Analysis

This study utilized a combination of descriptive and inferential statistics to analyze the data collected. Descriptive statistics were used to describe the subjects' demographic characteristics, caseload characteristics, and the assessment procedures and practices they employed. Other statistical procedures used included (a) correlation analyses, and (b) one-between, one-within analyses of variance (ANOVA).

The Pearson product-moment co-efficient was used to test hypotheses related to research questions 4, 5, 7 and 8. These hypotheses dealt with the relationship between the numeric variables of caseload size and caseload composition, or age and years of experience. This type of analysis provided information regarding the extent of the linear relationship between the variables being analyzed (Fink, 1995).

Analyses of variance (ANOVA) were used to test hypotheses related to question 6. ANOVA is generally used to compare the means of three or more groups (Runyon, Haber, Pittenger & Coleman, 1996). For this question, the respondents were categorized into groups based on the school setting variables on employment status (full-time versus part time), school geographic location and school type (pre-school through high school). The group means were then compared to the mean frequency with which they use selected assessment practices with bilingual children.

Summary

This study described school-based SLPs' assessment practices, procedures and perceptions with regards to language assessment of bilingual students. This study also investigated the relationship between selected demographic variables and speech-language pathologists' use of recommended assessment practices for bilingual children. It also described the extent to which SLPs differed in the types of assessment procedures employed with bilingual students versus those used with English-only speaking students. This study utilized a survey research method which involved the mailing of a survey instrument to all public school SLPs with membership in the Michigan Speech-Language-Hearing Association (MSHA). The data was analyzed using descriptive and inferential statistics.

CHAPTER IV

RESULTS

The purpose of this study was to describe the assessment practices of school-based speech-language pathologists (SLPs) employed in the state of Michigan a relationship between selected demographic, caseload, and work-setting variables and the language assessment practices SLPs employed most frequently with bilingual and English language learners. Specifically, the study was designed to describe the language assessment procedures used by SLPs when assessing English-speaking students and those used when assessing bilingual students. The relationship between SLPs' self-reported assessment practices and their perceptions regarding the importance of selected types of assessment information (products) is also investigated.

This chapter has three sections. First, a descriptive analysis of the data is presented. Second, the findings from the research questions and hypotheses are described. Lastly, the data outlined in the chapter are summarized.

Subjects

The respondents in this study consisted of 409 school-based speech-language pathologists in the state of Michigan who were members of the Michigan Speech-Language-Hearing Association (MSHA). Of the 596 questionnaires sent out, 448 were returned, indicating a 75% return rate. Of the 448 returned, 33 were from SLPs who did not meet criteria for the study either because they were retired or no longer lived in the

state of Michigan. Also, five questionnaires were returned by the Post Office labeled “unknown”. Thus, the analyses presented in this chapter were based on data from 409 useable questionnaires, which represent 69% of the initial target participant group.

Respondent Characteristics

The demographic profile of the respondents in this study was in close approximation with the national membership of the American Speech-Language Hearing Association (ASHA), which in June 2003 was 95% White and 95% female (ASHA, 2003). The respondents in this study were also predominantly White ($n = 398$, 95%) and female ($n = 399$, 98%). The mean age of respondents was 43.32 years. Minorities comprised 5% of the respondents and included the following ethnic groups: African Americans, Asian Americans, Hispanics, and one individual who self-identified as biracial. A summary of respondents’ demographic characteristics is presented in Table 1. With regards to language proficiency, 25 respondents (6.2%), reported being able to speak a language other than English. Among SLPs reporting other language proficiency, nine languages were identified; those most frequently identified were American Sign Language (ASL), Spanish, and German. Table 2 presents a summary of the languages spoken among responding SLPs.

Table 1

Demographic Characteristics of Respondents (N=409)

Response Category	# of Respondents	% of Respondents
Age		
Less than 34	109	27.9
35 - 44	83	21.2
45 - 54	144	36.8
55 - 69	55	14.1
Race/Ethnicity		
African American	17	4.3
Asian	1	.3
Caucasian	377	94.7
Latino	2	.5
Biracial	1	.3
Highest Degree Earned		
BA/BS	11	2.8
MA/MS	374	93.7
Ph.D/Ed.D	0	0
Other Degree	14	3.6
Certification ^a		
Michigan	306	76.7
CCC-SLP ^b	334	83.7
CCC-SLP/A ^c	1	.3
Other	18	4.5

Table 1—Continued

Response Category	# of Respondents	% of Respondents
Language Proficiency		
Bilingual	25	6.2
Monolingual	376	93.8

Note. All respondents did not answer all questions. ^aRespondents may have more than one certification type, thus the sum of percentages >100. ^bCertificate of Clinical Competence. ^cDual Certification: SLP/Audiology.

Table 2

Languages Other than English Spoken by Responding SLPs (n=25)

Languages	# of Respondents	% of Respondents
American Sign Language (ASL)	7	28
Spanish	5	20
German	3	12
Bulgarian	1	<1
French	1	<1
Haitian Creole	1	<1
Hebrew	1	<1
Japanese	1	<1
Russian	1	<1
Language not indicated	4	16

Employment Context

Table 3 summarizes the respondents' employment status and settings. In terms of *total* years of experience, and years in *current* setting, SLPs reported a range of 1-38 years. The mean total years of experience were 14 years, and mean length of time at current school was reported to be 11 years. The majority of the respondents (88%) were full-time employees. Part-time employees worked an average of 21 hours per week, but total weekly hours ranged from 8 to 35 hours. Although the majority of the respondents provided services in elementary schools (78%), nearly half of the respondents (49%) were employed in multiple settings. Other settings mentioned include center-based, parent education, and early intervention programs. More than half of the respondents (63.5%) were employed in southeast Michigan.

Table 3

Respondents' Employment Context (N=409)

Response Category	# of Respondents	% of Respondents
Employment Status		
Full Time	359	88.2
Part Time	48	11.8
Employment Settings ^a		
Pre-School	205	50.5
Elementary	317	78.1
Middle	145	35.5
High	110	27.1
Other	65	15.9

Table 3—Continued

Response Category	# of Respondents	% of Respondents
School Location		
U-P & Northern	35	8.9
Michigan's Thumb	27	6.9
SW Michigan	77	19.5
SE Michigan	255	65.8

Note. All respondents did not answer all questions. ^a Respondents may work in more than one setting, thus the sum of percentages >100.

Caseload and Service Delivery Characteristics

Respondents' caseload and service delivery characteristics are summarized in Table 4. Although the mean caseload of 50 conforms to State recommendations for caseload size limits (ASHA, 1993), 58 respondents (14 %) indicated caseloads ranging from 60 - 64, and 53 respondents (13%) reported caseloads ranging from 65-75. One respondent reported a caseload of 94 students. Table 5 summarizes the languages spoken among students served. However, only about half of respondents (48.9%) reported having bilingual students on their caseloads. Six SLPs reported having 20 or more students on their caseloads who speak a language other than English. Respondents reported therapy sessions lasting as long as 1 hour, and up to 10 weekly therapy contacts.

Respondents were also asked to indicate the types and severity of communicative disorders demonstrated by students on their caseloads. Results indicated that respondents served more students with language disorders ($M=27.53$) and articulation disorders

($M=20.58$) than any other disorder type. Respondents reported the fewest number of students in the area of voice disorders ($M = 1.39$). Whereas students on respondents' caseloads ranged from mild to severe, the mean number of students on their caseloads classified as 'moderate' ($M = 20.98$) was higher than the other categories of 'mild', 'moderately-severe', and 'severe'.

Table 4

Caseload and Service Delivery Characteristics (N=409)

Response Category	Range	Mean	SD
Caseload size and diversity			
# all students	0-94	49.55	14.18
# bilingual students	0-55	2.12	5.52
Caseload type			
# Articulation	1-70	20.58	12.35
# Hearing loss	0-58	2.69	6.81
# Fluency	0-12	2.42	1.75
# Language	1-94	27.53	14.30
# Voice	0-58	1.39	5.15
Caseload severity			11.12
# Mild	0-60	13.86	12.44
# Moderate	1-90	20.98	9.27
# Moderately-severe	1-80	11.56	11.31
# Severe	0-95	10.13	
Service delivery characteristics			

Table 4—Continued

Response Category	Range	Mean	SD
Therapy session duration ^a	10-60	28.64	7.89
# of weekly sessions	1-10	1.95	.73

Table 5

Languages Spoken by Bilingual Students on Respondents' Caseloads (n=283)

Languages	# of Respondents	% of Respondents
Spanish	179	63.20
Arabic	116	41.90
Chinese	52	18.30
Korean	26	9.20
Laotian	18	6.30
Hmong	17	6.00
Urdu	14	4.90
Russian	13	4.50
Albanian	12	4.20
Japanese	10	3.50
Vietnamese	9	3.10
ASL/SEE	8	2.80
French	8	2.80
Polish	8	2.80
Chaldean	7	2.40
German	7	2.40
Rumanian	6	2.10
Hindu	3	.10
Tagalog	3	.10
Bengali	2	.07
Dutch	2	.07
Italian	2	.07
Macedonian	2	.07

Table 5—Continued

Languages	# of Respondents	% of Respondents
Somali	2	.07
Croatian	1	.04
Ibo	1	.04
Lithuanian	1	.04
Marathi	1	.04
Native American	1	.04
Portuguese	1	.04
Punjabi	1	.04
Tamil	1	.04
Turkish	1	.04
Slavic	1	.04

Results of Analysis of Research Questions

In this section, the research questions and hypotheses (where appropriate) stated in Chapter 3 are restated, and results provided for individual items. The dependent variables used in testing of the hypotheses are also described. All hypotheses were tested at the .05 level of significance.

Descriptive Research Questions

The first three research questions were descriptive in nature; thus the results are presented in the form of descriptive statistics. Respondents were asked to indicate which assessment procedures they used most frequently with (a) monolingual English-speaking students, and (b) bilingual English-language learners.

Research Question 1

Question 1a. What assessment procedures do SLPs use most frequently for evaluating monolingual English-speaking students?

Respondents indicated their frequency of use of 20 commonly used language assessment procedures using a 4-point Likert-like scale (1=often, 2=sometimes, 3=rarely, and 4= never). Respondents were also asked to list other procedures (not included in the questionnaire), that they use frequently for assessing monolingual English-speaking students.

Table 6 provides a summary of the assessment procedures used most frequently by responding SLPs. The procedures used most frequently by respondents included (a) parent /teacher interviews (98.5%), (b) informal observations (95.7%), and (c) language sampling (94.2%). The *Detroit Test of Learning Aptitude (DTLA)* was used by fewer SLPs than any other procedure (2.6%).

Table 7 summarizes participants' responses to the open-ended 'other' category for language procedures used with English-speaking students. A total of 22 other procedures were mentioned by 185 SLPs. Specific language assessment procedures mentioned by 10% or more of these SLPs included the *Comprehensive Assessment of Spoken Language* (23%), *Selected Infant Scales* (15%), *Oral and Written Language Scales* (12%), and the *Test of Auditory Perceptual Skills/Comprehensive Receptive and Expressive Vocabulary Test* (11%). Seventeen percent of the respondents listed non-language assessment

measures (such as articulation, fluency, and phonological assessment measures) that are not included in this summary of other language tests.

Table 6

Summary of Assessment Procedures with Monolingual English-Speaking Students (N=409)

Assessment Procedures	# of SLPs	# Indicating 1 or 2	% Indicating 1 or 2
Parent/Teacher Interviews	397	391	98.5
Informal Observations	395	378	95.7
Language Sampling	397	374	94.2
Classroom Observations	393	343	87.3
<i>Clinical Evaluation of Language Functions.</i>	393	311	79.1
<i>Peabody Picture Vocabulary Test</i>	393	301	76.6
<i>Pre-School Language Scale.</i>	391	259	66.2
<i>Expressive One-Word Picture Vocabulary Test</i>	397	255	64.2
<i>Test of Language Development - P or I</i>	394	247	62.7
<i>Receptive One-Word Picture Vocabulary Test</i>	395	206	52.2
<i>Language Processing Test</i>	392	171	43.6
<i>Test for Auditory Comprehension of Language</i>	387	161	41.6

Table 6—Continued

Assessment Procedures	# of SLPs	# Indicating 1 or 2	% Indicating 1 or 2
<i>Expressive Vocabulary Test</i>	390	129	33.1
<i>Test of Problem Solving</i>	393	129	32.8
<i>The WORD Test</i>	391	113	28.9
Dynamic Assessment	386	108	28.0
<i>Structured Photographic Expressive Language Test</i>	390	98	25.1
<i>Assessing Semantic Skills Through Everyday Themes</i>	387	72	18.6
<i>Boehm Test of Basic Concepts</i>	390	65	16.7
<i>Detroit Test of Learning Aptitude</i>	391	10	2.6

Note. The value label is as follows: 1 = often, 2 = sometimes, 3 = rarely, 4 = never.

Table 7

'Other' Assessment Procedures Used with Monolingual English-Speaking Students
(n=185)

Assessment Procedures	# of Respondents	% of Respondents
<i>Comprehensive Assessment of Spoken Language</i>	42	22.7
<i>Rossetti Infant-Toddler Language Scale</i>	27	14.6
<i>Oral and Written Language Scales</i>	23	12.4

Table 7—Continued

Assessment Procedures	# of Respondents	% of Respondents
<i>Test of Auditory Perceptual Skills</i>	21	11.4
<i>Receptive-Expressive Emergent Language Test</i>	11	5.9
<i>Comprehensive Receptive and Expressive Vocabulary Test</i>	11	5.9
<i>Bracken Basic Concepts Scale</i>	8	4.3
<i>HELP Test</i>	7	3.8
<i>Test of Adolescent Language</i>	5	2.7
<i>Test of Word Finding</i>	3	1.6
<i>Early Language Milestones</i>	2	1.1
<i>Fluharty Preschol Language Screening Test</i>	2	1.1
<i>Test of Pragmatic Language</i>	2	1.1
<i>Illinois Test of Linguistic Abilities</i>	2	1.1
<i>Carolina Picture Vocabulary Test</i>	1	.5
<i>Test of Language Competence</i>	1	.5

Question 1b. What assessment procedures do SLPs use most frequently for evaluating bilingual students?

For this question, respondents were asked to list five tests or informal procedures, in decreasing order of use, which they use to assess bilingual students' language abilities. Respondents were also asked to indicate (a) the language of the test, (b) whether an

interpreter was used in the administration of the test, and (c) whether it was adapted. The SLPs responding to these questions (n=108) were those who had previously identified themselves as having bilingual students on their caseloads.

Respondents identified a total of 51 assessment procedures they use with bilingual children. Eleven of the procedures identified were excluded from this analysis, because they were not language procedures. Some of these non-language procedures include articulation and fluency tests. Thus, only 40 language assessment procedures were included in this analysis.

The three assessment procedures used by the highest number of respondents included (a) *The Peabody Picture Vocabulary Test* (51%), (b) *Clinical Evaluation of Language Functions* (36%), and Language Sampling (34%). Of the 40 procedures listed, over half (67%) were used by fewer than 10% of the respondents. Of these, 14 procedures were used by only one or two respondents. Table 8 provides an overview of the 40 different procedures respondents indicated using with bilingual speakers.

Further analysis of the procedures listed indicated that close to 98% of the respondents utilized or administered procedures designed for students of English. As shown in Table 9, the majority of respondents (75%) indicated English as the test language they used most frequently when assessing bilingual children. Other languages used include Spanish (14%), and American Sign Language (2%). Forty-eight percent of respondents reported using interpreter support when assessing bilingual children and 39 percent indicated that they adapted the test or procedure.

Table 8

Summary of Assessment Procedures Used with Bilingual Students (n=103)

Assessment Procedures	# of Respondents	% of Respondents
<i>Peabody Picture Vocabulary Test</i>	51	49.5
<i>Clinical Evaluation of Language Functions</i>	36	35.0
Language sampling	34	33.0
Expressive One-Word Picture Vocabulary Test	33	32.0
Parent/teacher interviews	23	22.3
<i>Pre-School Language Scale</i>	23	22.3
<i>Test of Language Development- P or I</i>	19	18.4
Classroom observations	14	13.6
<i>Receptive One-Word Picture Vocabulary Test</i>	13	12.6
Informal observations with peers	11	10.7
<i>Expressive Vocabulary Test</i>	10	9.7
<i>Test for Auditory Comprehension of Language</i>	8	7.8
<i>Assessing Semantic Skills Through Everyday Themes (ASSET/TEEM)</i>	8	7.8
<i>Receptive-Expressive Emergent Language Scales</i>	6	5.8
<i>Woodcock-Munoz Language Proficiency</i>	5	4.9
<i>Comprehensive Assessment of Spoken Language</i>	4	3.9
<i>Boehm Test of Basic Concepts</i>	3	2.9
<i>Oral and Written Language Scales</i>	3	2.9
<i>Structured Photographic Expressive Language Test</i>	3	2.9
<i>Test of Auditory Perception Skills</i>	3	2.9
<i>Test de Vocabulario de Imagenes Peabody</i>	3	2.9

Table 8—Continued

Assessment Procedures	# of Respondents	% of Respondents
<i>BOLD Approach to Assessment</i>	2	1.9
<i>Bilingual Verbal Ability Tests</i>	2	1.9
<i>Mc Arthur Communicative Development Inventories</i>	2	1.9
<i>Spanish Language Assessment Procedures</i>	2	1.9
<i>Standards-based Assessment and Measurement of Proficiency</i>	2	1.9
<i>Test of Non-verbal Intelligence</i>	2	1.9
<i>Bracken Basic Concepts Scale</i>	1	1.0
<i>Early Language Milestones</i>	1	1.0
<i>Special Needs Assessment Profile</i>	1	1.0
<i>Test of Language Competence</i>	1	1.0
<i>Test of Adolescent Language</i>	1	1.0
<i>Test of Problem Solving</i>	1	1.0
<i>Test of Word Finding</i>	1	1.0
<i>The WORD Test</i>	1	1.0

Table 9

*Language of Procedures Used by Respondents for Assessing Bilingual Students
(n=101)*

Languages	# SLPs Responding	% SLPs Responding
English	76	75
Spanish	15	14
ASL	2	2
Arabic	1	1
Urdu	1	1
Portuguese	1	1

Research Question 2

Question 2a. To what extent do SLPs employ formal versus informal (alternative) assessment procedures with monolingual English-speaking students?

To analyze respondents' responses, the 20 listed procedures were categorized into two groups: (a) formal assessment procedures, defined as standardized and/or published instruments, and (b) informal (alternative) assessment procedures, defined as non-standardized, descriptive, and/or clinician-devised procedures. Using a 4-point Likert-like scale (1=often, 2=sometimes, 3=rarely, and 4=never), respondents were requested to indicate the frequency with which they employed 15 formal, and 5 alternative assessment procedures. For the purpose of these analyses, the values of the labels were reversed

(4=often, 3=sometimes, 2=rarely, 1=never), in order to more clearly describe the relationships and differences.

Among the formal procedures, those respondents used most frequently with bilingual children were (a) *Clinical Evaluation of Language Functions* ($M = 3.28$), (b) *Peabody Picture Vocabulary Test* ($M = 3.22$), and (c) *Pre-school Language Scale* ($M = 2.90$). Of the 15 measures, the *Detroit Test of Learning Aptitude* was used least ($M = 1.13$). In terms of the alternative assessment procedures, parent and teacher interviews were the most often used ($M = 3.91$), and dynamic assessment the least used ($M = 1.85$).

In summary, results indicate that when testing their monolingual English-speaking students, SLPs utilized four of the five forms of formal (alternative) assessment (except dynamic assessment) more frequently than any of the formal assessment procedures listed. Table 10 shows the respondents' mean usage and rankings of the 15 formal procedures, and Table 11 summarizes the respondents' rating of the five alternative procedures.

Question 2b. To what extent do SLPs employ formal versus informal (alternative) assessment measures with bilingual students?

For this question, respondents were asked to list the five tests and informal procedures, in decreasing order of use, they use most frequently for evaluating bilingual students' language abilities. In terms of formal procedures, the three used by the highest number of SLPs include (a) *The Peabody Picture Vocabulary Test* (50%), (b) *Clinical Evaluation of Language Functions* (35%), and (c) *Expressive One-Word Picture*

Vocabulary Test (32%). Table 12 summarizes the percentages of SLPs reporting usage of the 15 most frequently-used formal assessment procedures.

Table 10

Ten Formal Assessment Measures Used Most Frequently with Monolingual Students

Formal Procedures	Mean	SD	Rank
<i>Clinical Evaluation of Language Functions</i>	3.28	1.04	1
<i>Peabody Picture Vocabulary Test</i>	3.22	1.07	2
<i>Preschool Language Scale</i>	2.90	1.15	3
<i>Expressive One-word Picture Vocabulary Test</i>	2.89	1.09	4
<i>Test of Language Development</i>	2.76	1.11	5
<i>Receptive One-word Picture Vocabulary Test</i>	2.51	1.21	6
<i>Test of Auditory Comprehension of Language</i>	2.22	1.13	7
<i>Language Processing Test</i>	2.19	1.13	8
<i>Test of Problem Solving</i>	2.01	.97	9
<i>Expressive Vocabulary Test</i>	1.95	1.17	10

Note. The reversed value labels are as follows: 4=often; 3=sometimes; 2=rarely; 1=never.

Table 11

Frequency of Use of Alternative Assessment Measures Used with Monolingual Students

Formal Procedures	Mean	Standard Deviation	Rank
Parent/teacher interviews	3.91	.44	1
Language sampling	3.76	.67	2
Informal observations	3.74	.56	3
Classroom observations	3.41	.79	4
Dynamic assessment	1.85	1.10	5

Note. The reversed value labels are as follows: 4=often; 3=sometimes; 2=rarely; 1=never.

In the alternative procedures categories, Language Sampling (33%) was the informal/alternative procedure most frequently used by SLPs when assessing bilingual students. Informal observation was the least frequently used procedure (10%) reported by respondents. Dynamic assessment was not mentioned. In summary, SLPs utilized a combination of formal and informal procedures for assessing their bilingual students. However, formal assessment procedures were used more frequently than informal assessment procedures when testing bilingual students.

Research Question 3

What are SLPs perceptions regarding the adequacy of their language proficiency and professional training with regard to language assessment of bilingual students?

Information regarding respondents' views about their language proficiency and the adequacy of their graduate and continuing education, was obtained using a 4-point Likert-like scale (1=strongly agree, 2=somewhat agree, 3=somewhat disagree, 4=strongly disagree) to indicate their agreement with five descriptive statements.

Table 12

Formal Assessment Procedures Used with Bilingual Students (n=103)

Assessment Procedure	# of Respondents	% of Respondents
<i>Peabody Picture Vocabulary Test</i>	51	49.5
<i>Clinical Evaluation of Language Functions</i>	36	35.0
<i>Expressive One-Word Picture Vocabulary Test</i>	33	32.0
<i>Pre-School Language Scale</i>	23	22.3
<i>Test of Language Development</i>	19	18.4
<i>Receptive One-Word Picture Vocabulary Test</i>	13	12.6
<i>Expressive Vocabulary Test</i>	10	9.7
<i>Test for Auditory Comprehension of Language</i>	8	7.8
<i>Assessing Semantic Skills through Everyday Themes</i>	8	7.8
<i>Receptive-Expressive Emergent Language Scales</i>	6	5.8

Table 13

Informal Assessment Procedures Used with Bilingual Students

Informal Procedure	# of Respondents	% of Respondents	Rank
Language sampling	34	33.0	1
Parent/teacher interviews	23	22.3	2
Classroom observations	14	13.6	3
Informal observations	11	12.6	4

Table 14 outlines these statements and summarizes respondents' perceptions regarding the adequacy of their language proficiency, graduate education, and continuing education opportunities in the area of bilingual assessment. Very few respondents agreed that their graduate education was adequate in terms of theoretical knowledge (5.6%) and practical experience (2.7%). More than half of responding SLPs (54%) indicated some disagreement that the availability of continuing education was adequate to their needs, with less than 10% indicating strong agreement. Although only 7% of respondents strongly agreed that they were qualified to contribute to the decision-making process regarding bilingual children's eligibility for services, over one-third (34.6%) indicated some agreement.

Table 14

Respondents' Perceptions Regarding Graduate and Professional Education (N=409)

Belief Statements	Mean	SD	% Indicating SA
I speak a language other than English with enough fluency to conduct bilingual evaluations.	1.70	1.03	6.7
My graduate education provided me with sufficient theoretical knowledge about language evaluations with bilingual students.	1.88	.95	5.6
My graduate education provided me with sufficient practical experience doing language evaluations with bilingual students.	1.54	.78	2.7
The availability of continuing education in the area of bilingual assessment is adequate to my needs.	2.15	.92	7.6
I am qualified to contribute to decisions regarding bilingual students' eligibility for special education services.	2.24	.91	7.3

Note: The value label is as follows: 4 = strongly agree (SA), 3 = somewhat agree, 2 = somewhat disagree, 1 = disagree.

Inferential Research Questions

Dependent Variables

The dependent variables used for research questions 4 to 8 consisted of the following five selected assessment practices: (a) use of formal and informal measures, (b) use of native assessment, (c) use of varied sources, (d) use of multiple contexts, and

(e) interpreter use. In the questionnaire, respondents were asked to indicate how frequently they used these practices when assessing bilingual students all the components of the dependent variable were measured on the following Likert-like 4-point scale: 1=often, 2=sometimes, 3=rarely, and 4=never. Responses were treated as interval data. The two assessment practices used most frequently by respondents were: (a) use of formal and informal measures (98.4%), and (b) use of multiple sources of information (97.7%). The practice which respondents used least frequently was use of native language in the assessment process (53%). Table 15 provides a description of respondents' frequency of usage of the dependent variable.

Research Question 4

Question 4 focused on the relationship between SLPs' demographic characteristics (age, years of experience, race, and language proficiency), and frequency of use of recommended assessment practices with bilingual students. Selected demographic characteristics were described and statistically analyzed in relation to the five dependent variables. Data for age and years of experience were reported as continuous data; language proficiency and race were reported as nominal data.

Dependent variable responses were measured on Likert-like 4-point scales, and were treated as interval data. For the purpose of these analyses, the values of the dependent variable's labels were reversed (4=often, 3=sometimes, 2=rarely, 1=never), in order to more clearly describe ascending or descending trends in the relationships between variables. Due to the homogeneity of respondents in terms of race and language

proficiency, these two characteristics could not be analyzed. The Pearson Product-Moment correlation test was used to examine the relationship between the variables age and years of experience, and frequency of use of each practice. The hypotheses were tested at the .05 level of significance. The demographic variables related to question 4 are discussed as question 4a and question 4b.

Table 15

Means and Standard Deviations of Use of Selected Assessment Practices with Bilingual Students (n=131)

Assessment Practices	# Responding	Mean	SD
Use of combination of formal and informal measures	128	3.87	.42
Use of English <u>and</u> native language assessment	128	2.63	1.18
Use of multiple sources of information.	129	3.86	.43
Use of observation in a variety of contexts	129	3.26	.80
Use of interpreters in the assessment process	128	2.99	1.10

Note: The reversed value labels are as follows: 4 = often, 3 = sometimes, 2 = rarely, 1 = never.

Question 4a. Is there a relationship between SLPs' age and frequency of use of recommended assessment practices with bilingual children?

The hypothesis related to this question predicted that a relationship exists between SLPs' age and their use of recommended assessment practices. This hypothesis was tested once for each dependent variable. As indicated in Table 16, the Pearson product-moment coefficient did not reveal a significant correlation among age and four of the dependent variables. However, a weak, but positive relationship was indicated between age and the use of 'observation in multiple contexts', $r(124) = .23, p = .009$, indicating that older SLPs are more likely to utilize observation in multiple contexts as an assessment method, than are younger SLPs.

Table 16

Correlations Between Age and Bilingual Assessment Practices

Assessment Practices	# Responding	<i>r</i>	<i>p</i>
Combined assessments	123	-.11	.222
English and native language	124	-.13	.139
Varied sources	124	-.02	.809
Multiple contexts	124	.23	.009
Interpreter use	123	-.10	.253

Question 4b: Is there a relationship between SLPs' total years of experience, and frequency of use of recommended assessment practices with bilingual students?

The hypothesis related to this question predicted that there would be a significant relationship between SLPs' total years of experience and their use of recommended assessment practices. This hypothesis was tested once for each dependent variable. As indicated in Table 17, the Pearson correlation coefficient did not reveal a significant correlation among years of experience for four of the five practices. However, a weak, but significant positive relationship was indicated between years of experience and the use of observation in multiple contexts (5), $r(127) = .23, p = .009$, indicating that more experienced SLPs tended to use observations in multiple contexts more frequently than less experienced SLPs. The hypothesis was therefore partially supported.

Table 17

Correlations Between Total Years of Experience and Use of Assessment Practices

Assessment Practices	# Responding	<i>r</i>	<i>p</i>
Combined assessments	126	-.09	.275
English and native language	126	-.10	.265
Varied sources	127	-.07	.408
Multiple contexts	127	.23	.009
Interpreter use	126	-.10	.253

Research Question 5

Question 5 focused on the relationship between SLPs' perceptions of their education and training characteristics (theoretical knowledge, practical experience) and frequency of use of recommended assessment practices for bilingual students. The independent variables analyzed in this question were related to respondents' perceptions regarding the adequacy of their training with regards to (a) theoretical knowledge and (b) practical experience. Respondents were asked to indicate the extent of their agreement with a series of statements using the following scale: 1=strongly agree, 2=somewhat agree, 3=somewhat disagree, and 4=strongly disagree. The Pearson Product-Moment correlation test was used to examine the relationship between respondents' perceptions of graduate training, and the frequency of use of recommended practices. The hypotheses were tested at the .05 level of significance.

Question 5a states: Is there a relationship between SLPs' perceptions of their theoretical knowledge and frequency of use of recommended assessment practices with bilingual students?

The hypothesis related to this question predicted a significant relationship between SLPs' perceptions of their graduate education in terms of theoretical knowledge and the frequency with which they employed recommended assessment practices. The Pearson product-moment correlation test revealed a significant positive relationship between SLPs' theoretical knowledge of bilingual assessment and the frequency with which they employed a combination of formal and informal assessment practices, $r(118)$

= .23 ($p = .011$). No significant relationship was indicated for the respondents' use of (a) English and the native language, (b) varied sources, (c) multiple contexts, and (d) interpreters. The hypotheses were partially supported. Table 18 summarizes the correlation results.

Table 18

Correlations Between Perceptions of Graduate Theoretical Training and Assessment Practices

Assessment Practices	# Responding	r	p
Combined assessments	118	.23	.011
English and native language	118	.09	.341
Varied sources	119	.06	.471
Multiple contexts	119	-.11	.243
Interpreter use	118	.01	.932

Question 5b states: Is there a relationship between SLPs' perceptions of practical experience during graduate training and frequency of use of recommended assessment practices with bilingual students?

The hypothesis related to this question predicted a significant relationship between SLPs' perspective of their graduate education in terms of practical experience and the frequency with which they employed recommended assessment practices. This

hypothesis was not supported; the Pearson product-moment correlation tests did not reveal significant relationships between their perceptions of practical training received during graduate training and their use of recommended assessment practices. Results are summarized in Table 19.

Table 19

Correlations Between Perceptions of Graduate Practical Experience and Assessment Practices

Assessment Practices	# Responding	<i>r</i>	<i>p</i>
Combined assessments	118	-.13	.154
English and native language	118	-.15	.112
Varied sources	119	-.13	.156
Multiple contexts	119	.07	.448
Interpreter use	118	-.03	.711

Research Question 6

Question 6 focused on the relationship between SLPs' work-setting characteristics (type of employment, school level, and geographic location) and frequency of use of recommended assessment practices with bilingual students. One-way mixed (within, between) factorial analyses of variance (ANOVAs) were used to test the three

hypotheses. An *a priori* alpha level of .05 was selected. The work setting variables related to research question 6 are discussed as question 6a and 6b.

Question 6a states: Is there a difference among SLPs employed full time versus SLPs employed part time in terms of their frequency of use of recommended assessment practices?

The hypothesis related to this question predicted a significant difference among SLPs employed full time versus SLPs employed part time in terms of their frequency of use of recommended assessment practices. The hypothesis was not supported. A one-way mixed (between, within) factorial analysis of variance (ANOVA) was used to test for differences in the mean use of recommended assessment practices between two groups of SLPs: full time (FT) versus part time (PT). As indicated in Table 20, analyses yielded no significant main effects between the full-time and part-time groups, or the group by practices interaction. However, within group differences were indicated for the recommended assessment practices. Simple effects analysis of the recommended assessment practices, utilizing a Tukey honestly significant difference (HSD) post hoc test, indicated that respondents used the 'English and native language' assessment practice significantly less frequently than the other four practices, namely (a) use of formal and informal procedures, (b) use of varied sources, (c) use of multiple contexts, and (d) interpreter use. Table 21 presents the means and standard deviations for the two groups.

Question 6b states: Is there a difference among SLPs employed in the following five school settings: (a) pre-school only, (b) elementary school only, (c) middle school only, (d) high school only, and (e) multiple school settings, and the frequency with which they use recommended assessment practices with bilingual students?

The hypothesis related to this question predicted a significant difference among SLPs employed in various school settings in terms of their frequency of use of recommended assessment practices.

Table 20

Means and Standard Deviations for SLPs Employed Full-Time (FT) versus Part-Time (PT)

Practices	FT SLPs		PT SLPs	
	Mean	SD	Mean	SD
Combined assessments	3.88	.43	3.91	.27
English and native language	2.64	1.17	2.46	1.24
Varied sources	3.85	.48	4.00	.26
Multiple contexts	3.27	.78	3.46	.75
Interpreter use	2.95	1.09	3.46	.87

Table 21

ANOVA Summary Table for Full-Time/Part-Time (FT/PT) Employment

Source	Df	SS	MS	F	p
FT/PT (A)	1	.945	.945	.761	.385
S/A	120	149.024	1.242		
Practice Type (P)	4	51.552	12.888	22.819	.000
A X P	4	2.568	.642	1.137	.338
Error (PxS/A)	480	271.094	.565		

A one-way mixed (between, within) factorial analysis of variance (ANOVA) was used to test for differences in the mean use of five recommended assessment practices by the five groups of SLPs.

Results indicated statistically significant main effects for both school settings and instructional practices, $F(4, 107) = 3.76, p = .007$, $F(4, 428) = 15.40, p = .000$, respectively (see Table 22). Additionally, a significant effect was noted for the setting by practice interaction, so an analysis of the simple effects was initiated. Results indicated that for both conditions, the high school group use of these practices was significantly less frequent. Also, within group differences for the recommended assessment practices were noted ($p = .000$). The means and standard deviations for each method are presented in Table 23.

Question 6c states: Is there a difference between SLPs employed in the four MSHA-specified geographic regions, and frequency of use of five assessment practices with bilingual students?

The hypothesis related to this question predicted a significant difference among SLPs employed in the four specified geographic regions in terms of their frequency of use of recommended assessment practices. SLPs were asked to indicate the geographic region which best described the location of their current employment: (a) Region 1, upper peninsula and northern Michigan; (b) Region 2, Michigan's thumb; (c) Region 3, southwestern Michigan, and (d) Region 4, southeastern Michigan.

Table 22

ANOVA Summary Table for School Settings by Assessment Practices

Source	Df	SS	MS	F	p
Settings (A)	4	17.666	4.417	3.762	.007
S/A	107	125.632	1.174		
Practice Type (P)	4	34.015	8.504	15.396	.000
A X P	16	16.420	1.026	1.858	.023
Error (PxS/A)	428	236.398	.552		

Table 23

Means and Standard Deviations for Frequency Ratings of Assessment Practices by School Setting Groupings (n=112)

Practices	School Level Groupings				
	Pre-school	Primary	Middle	High	Multiple
Combined assessments	3.93 (.258)	3.87 (.434)	4.00 (.000)	4.00 (.000)	3.89 (.051)
English/native language	3.00 (1.134)	2.17 (1.085)	3.50 (.707)	1.67 (.577)	2.76 (.144)
Varied sources	4.00 (.000)	3.83 (.592)	4.00 (.000)	4.00 (.000)	3.84 (.055)
Multiple contexts	3.60 (.632)	3.13 (.819)	3.00 (1.414)	3.00 (.000)	3.23 (.10)
Interpreter use	3.86 (.363)	2.57 (1.135)	4.00 (.000)	2.67 (1.528)	3.00 (.132)

Note: Standard deviations appear in parentheses below means.

A one-way mixed (between, within) factorial ANOVA was conducted to determine if there were differences in the frequency of use of assessment practices among the four groups. Results indicated no significant main effects across the four groups of respondents, $F(3, 114) = 2.12, p = .101$, but a significant interaction between groups and practices, $F(11, 456) = 2.22, p = .010$, and significant main effects for practices, $F(4, 12) = 18.63, p = .000$. Table 24 summarizes the ANOVA results.

Table 24

ANOVA Summary Table for Geographic Regions by Assessment Practices

Source	Df	SS	MS	F	p
Regions (A)	3	7.13	2.538	2.123	.101
S/A	114	136.252	1.195		
Practice Type (P)	4	40.911	10.228	18.625	.000
A X P	12	14.600	1.217	2.216	.010
Error (PxS/A)	456	250.400	.549		

Simple effects for region-based groups indicated that for both conditions, the Region 1 (Northern Michigan) group tended to assess students less frequently in their native language than SLPs in any of the other three regions. A similar effect was indicated for the interpreter use condition, with the Northern Michigan group use of interpreters being significantly less frequent than the other three groups.

These results indicate that SLPs in different regions used assessment practices with different frequencies, and that this variation occurred as a function of geographic region. There were also differences in the frequency of usage among the different assessment practices, independent of geographic region. Table 25 summarizes the means and standard deviations for each condition (assessment method).

Table 25

Means and Standard Deviations for Frequency Ratings of Assessment Practices by Geographic Location (n= 118)

Method	School Geographic Location			
	Region 1	Region 2	Region 3	Region 4
Combined assessments	3.67 (.58)	4.00 (.00)	3.96 (.19)	3.84 (.48)
Native language	1.00 (.00)	3.00 (1.41)	3.04 (1.13)	2.59 (1.14)
Varied Sources	4.00 (.00)	4.00 (.00)	3.86 (.35)	3.85 (.47)
Multiple Contexts	3.50 (.70)	3.80 (.45)	3.24 (.73)	3.29 (.81)
Interpreter Use	2.33 (1.16)	2.80 (1.30)	3.54 (.84)	2.93 (1.09)

Note. Standard deviations in parentheses.

Research Question 7

Question 7 focused on the relationship between SLPs' caseload characteristics (caseload size, caseload diversity) and frequency of use of recommended assessment practices with bilingual students. The hypothesis related to this question predicted a significant relationship between SLPs' caseload characteristics (size, diversity) and their frequency of use of the five types of recommended assessment practices. The two independent variables analyzed in this question were related to respondents' numerical descriptions of (a) the number of students on their current caseload, and (b) the number of bilingual students on their current caseload. Caseload diversity was calculated by

dividing respondents' current caseload by the number of bilingual students they reported. All analyses controlled for respondents' part-time/full-time status. The Pearson Product-Moment correlation test was used to examine both of the independent variables in this question. The findings are described below as questions 7a and 7b. The hypotheses were tested at the .05 level of significance.

Question 7a states: Is there a relationship between SLPs' caseload size and frequency of use of recommended assessment practices with bilingual students?

The hypothesis for this question predicted a significant relationship between SLPs' caseload size and their frequency of use of recommended assessment practices. The hypothesis, which was not supported, was tested once for each of the five dependent variables. As indicated in Table 26, the Pearson product-moment correlation test revealed no significant relationship between SLPs' caseload size and the frequency with which they used recommended assessment practices, regardless of their full-time or part-time status.

Question 7b states: Is there a relationship between SLPs' caseload diversity and frequency of use of recommended assessment practices with bilingual students?

The hypothesis related to this question predicted a significant relationship between SLPs' caseload diversity (as measured by the proportion of bilingual students on their caseload) and the frequency of use of recommended assessment practices. Almost half of the respondents (49%) reported caseloads which were not diverse. The hypothesis was tested using the Pearson product-moment correlation test, which did not reveal a

significant relationship between SLPs' caseload diversity and the frequency with which they employed recommended assessment practices with bilingual children. Table 27 presents the findings.

Table 26

Correlations Between Caseload Size and Assessment Practices (n=114)

Assessment Practices	<u>Full</u>	<u>Time</u>	<u>Part</u>	<u>Time</u>
	r	p	r	p
Combined assessments	.100	.301	.431	.162
Native language	-.129	.180	-.003	.992
Varied sources	.000	.999	-.158	.606
Multiple contexts	.103	.283	.046	.882
Interpreter use	-.016	.871	.190	.553

Table 27

Correlations Between Caseload Diversity and Assessment Practices (n=128)

Assessment Practices	#	r	p
	Responding		
Combined assessments	115	-.050	.597
Native language	116	.030	.749
Varied sources	116	.071	.449
Multiple contexts	116	.046	.621
Interpreter use	116	.098	.294

Research Question 8

Question 8 states: Is there a relationship between SLPs' perceptions regarding the importance of recommended types of information of assessment information and their use of recommended assessment practices with bilingual students?

For this question, respondents were asked to rate the importance of obtaining recommended types of information as the end products (outcomes) of assessment. These five outcomes were as follows: (a) language proficiency, defined as the language the child is more comfortable speaking; (b) language learning capacity, defined as how easily the child learns a new language; (c) language dominance, defined as the language the child speaks most of the time; (d) language learning style, or how best the child learns a new language; and (e) language difference versus language disorder differentiation, or differentially diagnosing the cause of the child's language difficulties. Respondents were asked to rate their perceptions regarding the importance of these assessment products (information types) on a 4-point Likert-like scale (1=very important, 2=somewhat important, 3=not too important, and 4=not at all important). The majority (91-98%) of respondents rated all of the five products as either 'Very Important' or 'somewhat important'. No respondents rated the Language Difference versus Disorder end-product as 'not too important' or 'not at all important'. Table 28 summarizes respondents' opinions regarding the importance of these five assessment products.

Table 28

Means and Standard Deviations of Perceptions Regarding Importance of Assessment Information (n=131)

Information Types (Products)	Mean	SD	% indicating 4 or 3
Information regarding Language Proficiency	3.86	.425	98.5
Information regarding Language Learning Capacity.	3.51	.626	94.6
Information regarding Language Dominance.	3.91	.381	98.5
Information regarding Language Learning Style.	3.43	.695	91.4
Distinguishing a language difference from a language disorder.	3.95	.210	100.0

Note: The value label is as follows: 4 = very important, 3 = somewhat important, 2 = not too important, 1 = not at all important.

The hypothesis for this question stated that there would be a significant relationship between SLPs' perceptions about the importance of selected assessment products, and their use of recommended assessment practices. A Pearson product-moment correlation was used to analyze the relationship between the five assessment outcomes, and the five recommended assessment practices. Intercorrelational analyses

were done using the five product statements and the five recommended assessment practices. The Pearson correlation coefficient did not reveal a significant correlation between SLPs' perceptions and the assessment practices labeled as combined assessments', 'English and native language use', and 'multiple contexts'. However, a significant positive relationship was indicated between interpreter use, and perceptions regarding obtaining information about the child's language proficiency, $r(129) = .19, p = .03$, as well as testing in varied contexts and perceptions regarding obtaining information about the child's language learning style, $r(126) = .21, p = .02$.

These results indicate that SLPs, who viewed obtaining information regarding language proficiency as very important, tended to utilize interpreters more often than those who viewed language proficiency information as less important. In addition, SLPs who assigned greater importance of to the practice of obtaining information regarding learning style, also tended to assess children in a variety of contexts more often than those who viewed learning style as less important. Table 29 presents the correlation coefficients of all the variables.

Table 29

Pearson Moment Coefficients Between Importance Ratings and Use of Assessment Practices

Practices	Language Proficiency	Learning Capacity	Language Dominance	Learning Style	Difference vs. Disorder
Combined assessments	.04	-.08	-.02	-.02	.11
Native language	.12	.14	-.11	.07	.09
Varied sources	.04	-.01	-.06	.05	-.01
Multiple contexts	.06	-.03	.02	.21*	-.03
Interpreter use	.19*	.12	.05	.12	.01

* $p < .05$.

Summary of Results

This chapter presented the findings regarding each of the research questions posed. First, the results of the descriptive questions were summarized; next, the results of the inferential questions were presented. In addition to the 9 descriptive and inferential research questions, the results of eleven hypotheses were outlined. A summary of the results of the research findings are presented in Table 30.

Table 30

Summary of Results for Each Research Question

Research Question	Description	Findings
1	Which assessment procedures do SLPs use most frequently for assessing monolingual English-speaking students and bilingual English-language learners?	Descriptive
2	To what extent do SLPs employ formal versus informal (alternative) assessment procedures with (a) monolingual English-speaking students, and (b) bilingual English-language learners?	Descriptive
3	What are SLPs perceptions regarding the adequacy of their language proficiency and professional training with regard to language assessment of bilingual children?	Descriptive
4	Is there a relationship between SLPs' demographic characteristics and the frequency with which they use recommended assessment practices?	Significant
5	Is there a relationship between SLPs' education and training characteristics and the frequency with which they use recommended assessment practices?	Significant
6	Is there a relationship between SLPs' work-setting characteristics and the frequency with which they use recommended assessment practices?	Significant
7	Is there a relationship between SLPs' caseload characteristics and the frequency with which they use recommended assessment practices?	Not significant
8	Is there a relationship between SLPs' perceptions regarding the importance of obtaining selected types of assessment information and the frequency with which they use recommended assessment practices?	Significant

CHAPTER V

DISCUSSION

This study utilized a survey research design to describe school-based speech-language pathologists' assessment practices with monolingual students and bilingual English language learners in the State of Michigan. It also analyzed relationships between respondents' demographic, caseload, and workload variables, and their frequency of use of selected assessment practices with bilingual children. In addition, survey data from the 409 responding SLPs provided information about their demographics, perceptions of graduate preparation, and views regarding the importance of obtaining selected bilingual assessment products.

This chapter (a) presents a discussion of the results of this research in the context of the study's importance; (b) outlines the limitations of the investigation; and (c) addresses the implications for practice in the area of bilingual assessment. This chapter also suggests directions for future research and provides concluding remarks on the topic of SLPs' language assessment practices with bilingual and English language learners.

Importance of the Study

Demographic Implications

Findings of the present study regarding the respondents' demographic profile indicate that the overwhelming majority of the respondents were Caucasian (95%),

monolingual (94%) and female (98%). Also, the majority of respondents (51%) were between 45 and 69 years, and many had worked in their current school settings for 14 years or more. These ethnicity, gender and age characteristics are in close proximity with the 2003 national profile of ASHA constituents (ASHA, 2004), which was 94% Caucasian and 95% female, with close to half of respondents being at least 45 years old.

This apparent racial/ethnic homogeneity among Michigan SLPs contrasts sharply with the linguistic diversity of the students to whom they provided services. Whereas only seven percent of SLPs reported being able to speak a language other than English, as many as 40 different languages were reportedly spoken among the students they served. Given the fact that Hispanic students are the fastest growing student group in schools across the United States (NCES, 2002), it is not surprising that Spanish was the language most frequently spoken by the majority (63 percent) of the bilingual students on SLPs' caseloads. What was unexpected is the diversity of languages found in a region of the U.S. where the state-wide school population of English Language Learners is only 2.6%.

It should be noted, however, that only about half of the responding SLPs actually reported having bilingual students on their caseload, with 2 bilingual students being the average number per caseload, but one individual reporting as many as 55. Overall, these results replicate the findings of a national survey done by Roseberry-McKibbin and Eicholtz (1994), which indicated a wide range in the total number of bilingual students on SLPs' caseloads, with Hispanics being the group most frequently mentioned by their

respondents (64%). These results suggest that the composition of SLPs' caseloads in Michigan may be very similar to those of other states nationally.

Graduate and Professional Preparation

Very few of the SLPs in this study (28%) agreed that their graduate education provided them with sufficient theoretical knowledge about language evaluations with bilingual students. Fewer still (13%) indicated that their practical experiences during graduate training had been adequate. Previous research studies reported similar results. For example, in a survey done by Roseberry-Mc-Kibbin (1995), only 23% of respondents indicated that they had had some coursework in the area of bilingual issues. In a more recent study, only 34% of the monolingual respondents in Kritikos (2003) study indicated that they had taken courses or attended workshops in this area. In the context of on-going opportunities for education in bilingual assessment issues, 40% of respondents viewed the availability of continuing education as adequate to their needs—suggesting that although woefully inadequate, in-service training opportunities surpass and outweigh the quality and quantity of pre-service graduate training regarding language assessment of bilingual students.

SLPs' perceptions of inadequate and insufficient training were further underscored by the results of correlational analyses done in this study. Results showed that in four of the five practices measured, neither graduate theoretical education nor practical training were strong predictors of SLPs' conformity to recommended practice guidelines in the area of bilingual assessment. This finding may suggest that even when

coursework and practicum experiences have been part of the SLP's graduate experience, that training may be inadequate or irrelevant to SLPs' current experience. Thus, even SLPs with graduate training may be unprepared to offer services in the area of bilingual assessment. It seems possible that graduate training programs may not be offering students sufficient coursework or practical experiences in this area. It may also be that the information being shared in this area is not backed by strong research or evidence-based practice (Apel, 2001).

It seems abundantly clear that appropriate pre-service and in-service training continue to be an area of need among school-based clinicians. These perceptions of inadequate graduate preparation persist despite recent ASHA mandates for increased infusion of multicultural concepts in graduate training programs (ASHA, 1989). The ongoing dissatisfaction of clinicians regarding their graduate preparation in the area of assessing students who are culturally diverse, strongly suggests that graduate programs are not successful in preparing their graduates to meet the demands of a rapidly changing clientele.

Interestingly, despite SLPs' perceptions regarding the inadequacy of their graduate and continuing education experiences, more than one-third of respondents 'somewhat' agreed that they are qualified to contribute to decisions regarding bilingual students' eligibility for special education services. These findings are similar to the results of Hammer and colleagues (2004) who found that despite respondents' claims of insufficient training; they had 'some confidence' with regards to bilingual assessment.

Such assertions of self-confidence beg the question as to what actually qualifies the school-based SLP to make eligibility decisions. Further findings from this study may provide a partial answer. The results of correlation analyses between respondents' age and years of experience, and their use of selected assessment practices revealed a significant positive relationship, suggesting that experience contributed more to SLPs' perceptions of being qualified than formal training experiences.

ASHA's (1996) statement on the scope of practice in speech-language pathology describes a broad range of professional roles for SLPs, including the recognition of

..the special needs of culturally diverse populations by providing services that are free of potential biases, including selection and/or adaptation of materials to ensure ethnic and linguistic sensitivity. (p .81)

It is quite likely that school-based SLPs may be having a difficult time conforming to ASHA's position statement regarding their scope of practice when they have neither been adequately trained in how to provide non-biased services in the area of bilingual assessment, nor have been given the necessary skills for ensuring compliance with professional standards. This position is supported by IDEA (1997) when it specifies that all assessments used for identifying and placing children in special education and related services, should be administered by "trained and knowledgeable personnel" (Section 300.352). Findings of this study suggest that many school-based SLPs are neither trained nor knowledgeable, and that university curricula in the area of bilingual assessment may be responsible.

Use of Assessment Procedures and Practices

Information regarding SLPs' assessment practices was obtained with reference to (a) the specific procedures they employed with both monolingual English-speaking students and bilingual English language learners; (b) the frequency with which they used specific preferred practice recommendations with bilingual children; and (c) the importance they attributed to specific bilingual assessment outcomes or products.

Procedures used with English-speaking students. A clear majority of SLPs used a combination of formal (published, standardized) and informal (alternative, non-standardized) assessments when working with monolingual students. Respondents indicated that they used at least 37 formal language assessment procedures with some degree of frequency when testing English-speaking children. However, the frequency of use of four of the five formal or alternative measures (parent/teacher interviews, informal observations, language sampling, and classroom observations) exceeded the frequency of all of the formal procedures listed. In contrast with previous studies (Beck, 1995; Hux, 1993) language sampling was not the alternative measure used most frequently by SLPs. In this study, interviews and observations predominated.

Dynamic Assessment (DA) was the alternative procedure used least with English speaking students, although over a quarter of respondents (28%) indicated using DA either 'frequently' or 'sometimes'. These results indicate that with the exception of DA, SLPs appear to consistently use alternative assessment measures when testing English-speaking children. This finding differs from a previous finding by Beck (1995), in which

she found that clinicians “depended more on formal assessment methods than on informal” (p. 57) for determining the presence of language disorder. These findings suggest a positive trend with regard to SLPs’ practice, as they appear to very closely conform to recommended practice regarding appropriate assessment.

Procedures used with bilingual children. SLPs working with bilingual and English language learners listed over 40 different formal and informal language assessment procedures they use with this population. Interestingly, there was more variability and less consensus among the procedures listed as being used frequently than there was with those used with monolingual children. For example, only 9-10 tests or informal procedures were used consistently by at least 10% of the respondents, with more than half of the listed procedures being used by only 1 or 2 responding clinicians. This lack of consensus in SLPs’ choice of assessment procedures, may either be consistent with feelings of low personal efficacy which many SLPs experience when assessing individuals in a language they do not speak or understand, or reflective of limited training in the area of language assessment of bilingual students (Kritikos, 2003).

Also, clinicians used the same top 7 to 9 formal procedures with both their monolingual and bilingual students, suggesting that the majority of SLPs employed similar techniques and procedures regardless of students’ linguistic status. The formal published procedures used most frequently by both groups were *Clinical Evaluation of Language Functions (CELF)*, the *Peabody Picture Vocabulary Test (PPVT)*, the *Expressive One-Word Picture Vocabulary Test (EOWPVT)*, the *Test of Language*

Development (TOLD), the *Preschool Language Scale* (PLS), and the *Receptive One-Word Picture Vocabulary Test* (ROWPVT), in descending order of frequency.

It is also clear from this research that SLPs tend to rely more on formal, standardized measures than informal alternative procedures, for determining bilingual students' eligibility for language services. As stated earlier, the reverse phenomenon occurs when they assess monolingual children's language ability—given that the top three measures used most frequently with monolingual students were informal. It would appear that formal, standardized testing is still used frequently with bilingual children—despite the fact that (a) the majority of standardized language tests are normed on the majority culture and language, (b) the literature is unequivocal in its denouncement of this form of testing for language minority children, and (c) legislation and legal decisions strongly discourage their exclusive use (IDEA, 1997; Losardo & Notari-Syverson, 2001; Saenz & Huer, 2003). It would seem more logical that alternative methods should predominate in the testing of students from bilingual backgrounds for whom few standardized tests are available. Based on results of this study, this was not the case.

In terms of the informal procedures which SLPs employ with their bilingual students, Dynamic Assessment was not mentioned by any of the respondents. Although, the four other alternative procedures were mentioned with varying degrees of frequency, more SLPs reported the use of two formal tests (PPVT, CELF) than any of the alternative measures listed. Among informal procedures, language sampling was used most frequently, although many respondents indicated that these were elicited in English only.

The absence of DA in the list of procedures used with bilingual students, merits further discussion. Currently, there is a growing body of literature in the field of speech-language pathology that strongly advocates DA as the most effective assessment procedure for evaluating culturally and linguistically diverse children (Butler, 1997; Guittierrez-Clellen, 2001; Jitendra, Rohena-Diaz & Nolet, 1998; Peña, Iglesias & Lidz, 2001). Proponents of this method believe that DA should be a vital component of every language evaluation, since it is not only capable of assessing the child's capacity to learn, but also differentiating a language difference from a language disorder (Peña & Quinn, & Iglesias, 1992).

It was also interesting to note that the majority of responding SLPs (75%) indicated that English was the language of the test or procedure they most frequently used when testing bilingual children. This was reported to occur even when Spanish versions of the tests existed, as in the case of the CELF and PLS for which Spanish editions exist, and the EOWPVT, which has a Spanish-bilingual edition. Also, less than half of respondents (48%) reported that they used an interpreter, and only one-third admitted to adapting the procedures or tests they used. It is clear from the literature (Ochoa et al., 1996; Ortiz, 1997) that language proficiency (a necessary bi-product of bilingual assessment) can only be obtained by assessing the child in both the native and second language. It is noteworthy that responding clinicians in this study were almost unanimous in their agreement regarding the importance of obtaining information regarding language proficiency. However, descriptions of their actual practice, strongly

suggest that there may be a significant disparity between SLPs' knowledge of 'best practice' and their actual implementation.

Use of Selected Assessment Practices

Speech-language pathologists' conformity to assessment recommendations selected from literature in the areas of special education and speech-language pathology was measured by a frequency of use scale for five assessment practices. Results indicated that SLPs' perceived themselves as consistently following the majority of the selected assessment recommendations. For example, the majority of respondents reported using the following practices at least 'sometimes': (a) a combination of formal and informal procedures (98%), (b) multiple sources of information (98%), and (c) observation in a variety of contexts (82%). However, fewer SLPs reported the use of interpreters in the assessment process (70%), or consistent use of assessment in the native language (53%).

It is interesting to note that the three practices which SLPs utilized most frequently are practices which apply to assessment in general and not merely to the assessment of bilingual children. The two least frequently used practices are those which specifically apply to the assessment of bilingual or English language learners. These findings suggest that while SLPs' assessment practices with the general (monolingual) population may be in general conformity to recommended assessment practices, school-based SLPs—the majority of whom are monolingual—are being challenged to comply with preferred practice recommendations in the area of bilingual assessment.

Several possible factors may account for SLPs' non-compliance in the areas of native language assessment and interpreter use. First and foremost, is the obvious fact that almost all the clinicians in this study who had bilingual caseloads were themselves monolingual. Results of previous studies (Langdon, 1989; Senega & Inglebret, 2003) which surveyed the assessment practices of bilingual SLPs with Hispanic students show a consistent trend toward native language testing in the choice of procedures used. The linguistic mismatch between SLPs' in this study and the 40 different language groups that they serve may be one explanation for the persistence of monolingual testing observed.

Another possible explanation may be the fact that many SLPs' have not been trained to determine their students' dominant language or level of language proficiency. Such testing is crucial as a means of determining in what language or languages the child should be tested (ASHA, 1999; Figueroa, 1989). Given the range of possible language groups with which SLPs could be presented, the field of speech-language pathology is more in need of a practice-based model of bilingual assessment than for programs focusing on increasing the numbers of bilingual language personnel.

The third possibility is closely related to the second. Many school personnel working with bilingual students may tend to overestimate their students' second language proficiency, based on observations of informal peer interactions. If personnel are not adequately trained, it is possible for them to mistakenly equate the child's social language proficiency with academic language competence (Laija-Rodriquez, 2002). It is critical for SLPs' to be able to differentiate between the child's basic interpersonal

communication skills (BICS), and cognitive academic language proficiency (CALP), so that social language competence is not erroneously used as an indicator of academic language proficiency or language dominance (Cummins, 1989).

Another possible explanation for SLPs' infrequent use of native language assessment and/or interpreter support, may be related to the relatively low concentration of culturally and linguistically diverse individuals in the state of Michigan. Whereas the Hispanic school-age population in states like Arizona and California may be as much as 34.5% and 42.3%, respectively, Michigan's Hispanic population accounts for only 4.4% (U.S. Census Update, 2002). It may be that accessing trained interpreters and bilingual para-professionals may be more difficult in a state where the proportions of culturally diverse individuals are so low.

Factors Affecting Recommended Practice Usage

This study also explored the possibility that occupational stressors such as caseload size and diversity, and work-setting variables may serve as inhibitors to SLPs' frequency of use of recommended assessment guidelines. In terms of the two caseload characteristics investigated (size, diversity), no relationship was observed; this suggests that intrinsic factors may be stronger predictors of SLPs' choice of practices than extrinsic variables such as paperwork volume and student diversity.

With reference to work-setting variables, three variables were explored: (a) employment status (full-time versus part-time), (b) employment setting (pre-school through high school), and (c) employment location (MSHA regions 1-4). Results

indicated that full-time versus part-time status did not significantly affect how SLPs assessed bilingual children; however, employment setting and employment location did appear to make a difference in terms of the assessment practices used. Understandably, differences existed in the frequency with which specific practices were used, since all practices were not used equally across all settings. For example, assessments in the native language were done less frequently in high school settings than in any other setting. This may be because student age may be highly correlated with years of exposure to a second language, thus making native language assessment unnecessary.

The observed differences in practice use based on respondents' school location may also be easily explained. Results indicated that SLPs employed in the northern Michigan and upper peninsula (UP) areas, tended to utilize interpreters and/or native language assessment less frequently than those in the more urban areas of Michigan. It may be that bilingual support in the form of available interpreter/translator services is more difficult to obtain in less diverse communities, and that these practices may be used more frequently in states with a greater proportion of bilingual students.

Importance of Types of Bilingual Assessment Information

Speech-language pathologists in this study were almost unanimous in their perceptions regarding the importance of selected assessment outcomes for bilingual children. The assessment outcomes which they were asked to rate were (a) obtaining information regarding language proficiency; (b) obtaining information regarding language learning capacity; (c) obtaining information regarding language dominance; (d)

obtaining information regarding language learning style; and (e) distinguishing a language difference from a language disorder. Close to 100 percent of respondents (92% - 100%) rated all five outcomes as either 'very important' or 'somewhat important'. In the case of the last stated outcome (distinguishing a language difference from a language disorder), none of the respondents rated it as 'not important'. These findings suggest that despite SLPs' perceptions of inadequate theoretical training, they are fully aware of the types of results bilingual testing should produce.

To some extent, these findings regarding SLPs' beliefs about assessment outcomes contradict their self-reports of the frequency with they use selected practices, as well as the types of procedures they use with bilingual children. For example, although 99 percent of respondents rated the importance of language dominance and proficiency information to be at least 'somewhat important', only half of respondents indicated that they assessed students in English and the native language. According to ASHA's (1999) guidelines for school-based SLPs, an assessment of bilingual students should always include a determination of where they are on the "continuum of language proficiency" and that this information is obtained from an evaluation of the "current use of first and second language" (p. 29). Further, the majority of respondents (75%) reported using English standardized tests with their bilingual students—an impossible feat for determining native language proficiency. The same principle can be applied to the ultimate goal of all language assessment—the differential determination of whether the child's language problems stem from a disorder or a difference. This, too, can only be

determined if the child is tested in both languages and the SLP ‘rules out’ the possibility of a disability in the first language (Kayser, 1995; Westernoff, 1991).

These results strongly suggest that SLPs are quite well aware of the outcomes of bilingual language evaluations, although they may not be obtaining these outcomes during their routine language assessments. The seeming discrepancy calls for further research and analysis beyond the scope of this study. However, it may be that one of the reasons why SLPs are so aware of their incompetence in the area of bilingual assessment (Kritikos, 2003), is that though they are cognizant of *what* constitutes ‘best practice’, they lack specific guidelines and tools for *how* implementing ‘best practice’. In a study done by Roseberry-McKibbin and Eicholtz (1994), 52.3% and 40% of respondents respectively, cited the lack of appropriate assessment instruments, and the lack of access to bilingual professionals as two of the problems they frequently encountered when assessing bilingual children.

Limitations

This study has four primary limitations. First of all, the data were collected from members of a single voluntary organization, in a single state. Individuals who elected to join the organization may not be representative of all school-based SLPs in the state of Michigan, and may definitely not be representative of SLPs nationally. Also, not all individuals who received the survey chose to complete it, thereby further reducing the generalizability of survey results. However, as indicated previously, since respondents’

demographics closely mirror the demographic profile of the national organization, this limitation need not produce undue concern (ASHA, 2004).

Secondly, because of the demographic homogeneity of respondents, relationships between race/ethnicity and language proficiency could not be investigated. In terms of race, only 4 of the 409 respondents (1%) described themselves as Asian (1), Hispanic (2) or Asian-White biracial (1). Also, although 25 respondents (6.2%) indicated that they spoke a language other than English, only 2 reported having bilingual children on their caseloads. The analyses were therefore limited to describing relationships between Caucasian clinicians and their culturally and linguistically diverse clientele.

Thirdly, this study did not inferentially analyze the differences between the procedures used for assessing monolingual students versus those used for analyzing bilingual students. Instead, descriptive statistics were used, and qualitative information provided regarding the status of bilingual assessment among Michigan SLPs. This approach was deemed necessary, given that prior to this study, little, if any, information existed in the research literature describing the assessment practices of monolingual SLPs with bilingual children. The absence of a statement of specific statistical difference is somewhat ameliorated by the rich interpretation possible through qualitative interpretation.

Finally, as is typical of most survey research, the veracity of the target group's responses could not be assessed, since this study was limited to participants' self-reports. It was therefore possible that respondents provided the answers they deemed

acceptable—but not necessarily descriptive of their actual practice. Also, this study did not provide information regarding the efficacy of the specific assessment practices, nor did it document actual performance.

Implications for Research

This research makes a valuable contribution to the body of knowledge regarding the status of language assessment of a range of bilingual students by speech-language pathologists. Little research, if any, has investigated the assessment practices of monolingual SLPs when working with bilingual students; a few studies have looked generally at service delivery to limited English proficient students (Roseberry-McKibbin & Eicholtz, 1994); bilingual SLPs assessment of bilingual children (Langdon, 1989; Senaga & Inglebret, 2003); or at bilingual SLPs' beliefs about language assessment (Kritikos, 2003). However, none of these studies required participants to (a) specifically delineate the assessment procedures they use for evaluating the language abilities of both their monolingual and bilingual students; (b) rate the frequency with which they actually conform to assessment practices recommended in the literature; or (c) analyze their views regarding the importance of specific bilingual assessment products.

In addition, this is the first study to propose a 'procedure-practice-product' model for describing the components of language evaluations with bilingual students. This study proposed that if bilingual language assessment begins with the selection of appropriate *procedures* (both formal and informal), executed according to specific

practice recommendations, then the appropriate outcomes or *products* would naturally result.

Methodologically, this study also contributes two new scales in the area of bilingual language assessment to the field of speech-language pathology. Prior to this study, no scales measuring SLPs frequency of usage of specific assessment practices or the importance of selected bilingual assessment outcomes had been established. Additional testing of these scales' validity and their relationship to documented outcomes should be conducted in future studies. Specifically, future research should extend the focus of this study to other states where higher proportions of language minority clinicians and students may produce different findings. Further research may also be necessary to determine whether conformity to recommended practice actually produces the desired assessment outcomes.

Another possible area of research which may emanate from this study is an investigation of course offerings by university graduate programs in the area of bilingual assessment. It is clear that SLPs do not deem themselves prepared for the challenges of working with culturally and linguistically diverse children, and that universities have a responsibility for preparing their graduates for the challenges of diverse service delivery. Further research is desperately and urgently needed in this area.

Implications for Practice

This study also highlighted several implications for SLPs practicing in school settings. It was interesting to note that in a state like Michigan where the minority

population is relatively small, SLPs reported more than 40 languages other than English being spoken among the bilingual students they served. More than half of SLPs reported having caseloads with at least one bilingual child. These data imply that even in states with less diversity, the chance of having to assess a bilingual student is very likely. In this age of changing demographics, no SLP is exempt from the possibility of being asked to provide services to culturally and linguistically (CLD) diverse children. All SLPs, therefore, need to be committed to facilitating the necessary changes that would move the profession “from past practice patterns to those that reflect current legislation, research, and practice guidelines” (Whitmire, 2002, p. 68).

Clinicians may also need to dismiss the erroneous belief shared by many experts, that recruiting more bilingual SLPs is the ultimate solution to the problem of non-biased assessment of bilingual children. Although the relationship between SLP language proficiency and assessment practice could not be investigated, the present study did suggest that bilingualism *per se* may not necessarily create an open communication challenge between the clinician and the bilingual child. It is possible for the language of the bilingual clinician to be radically different from that of the bilingual student, and merely being proficient in one second language may not assure the SLP of competent communication with the wide range of languages that a linguistically diverse child may speak. Neither is graduate coursework or theory necessarily the complete solution; clinicians will most likely have to engage in on-going research and information-gathering

regarding the linguistic attributes of particular languages as a means of equipping themselves to adequately serve bilingual children.

Finally, this study unearthed the possibility that many bilingual children may be inappropriately assessed by school-based SLPs who lack the knowledge, the tools, and/or the experience for adequately and appropriately assessing their language skills. It may be possible that though SLPs are aware of what needs to be done, they neither have the appropriate tools nor a clear methodological mandate as to how to proceed with the assessment of bilingual students on their caseloads. It is therefore imperative that state educational authorities provide clinicians with not only the necessary tests and procedures, but also continuing education opportunities and personnel support in the area of bilingual assessment.

Conclusion

The purpose of this study was to describe and analyze the language assessment practices of school-based speech-language pathologists with monolingual and bilingual English language learners in the state of Michigan.

In summary, this research had several findings. First, this study documents a paucity of culturally and linguistically diverse SLPs in schools where as many as 40 different languages may be spoken. The study also found that SLPs utilize similar procedures and practices when testing both their monolingual and their bilingual students. However, SLPs' assessment practices conformed more closely to federal and professional recommendations when they assessed monolingual children than when they tested

bilingual children. Findings also indicated that although SLPs perceive themselves as not being adequately prepared by their graduate programs for assessing bilingual children, many of them feel competent to participate in the decision-making process regarding students' eligibility for special education services. This perception of confidence appeared to be related to their age and total years of experience as school-based therapists. SLPs were also in unanimous agreement regarding the importance of selected products of bilingual assessment—even though their use of assessment practices did not substantiate their convictions.

This study is important because it extends the knowledge base on monolingual speech-language pathologists' assessment practices with both monolingual and bilingual students, and provides a model for investigating the extent to which 'actual' practice conforms to 'research-based' recommendations for practice. This dissertation also presents two new scales; one for measuring usage frequency of assessment practices, and another for rating the importance of bilingual assessment prerequisite products. This dissertation also provides a source of information on the diversity profile of students and SLPs in a low-diversity State. Future research should not only continue to investigate the relationship of recommended practice with respect to evidence-based outcomes, but also document the efficacy of the curricular offerings of university graduate programs in the area of bilingual assessment.

Appendix A

Approval Letters From Human Subjects Institutional Review Boards

WESTERN MICHIGAN UNIVERSITY



Human Subjects Institutional Review Board

Date: November 21, 2003

To: Paula Kohler, Principal Investigator
Lena Caesar, Student Investigator for dissertation

From: Mary Lagerwey, Chair

A handwritten signature in cursive script, reading "Mary Lagerwey".

Re: HSIRB Project Number: 03-10-16

This letter will serve as confirmation that the changes to your research project "Work and Well-Being of Speech-Language Pathologists" requested in your memo dated 11/20/03 (title change and updated survey instrument) have been approved by the Human Subjects Institutional Review Board.

The conditions and the duration of this approval are specified in the Policies of Western Michigan University.

Please note that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: November 3, 2004

Walwood Hall, Kalamazoo, MI 49008-5456
PHONE: (269) 387-8293 FAX: (269) 387-8276

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THE UNIVERSITY OF MICHIGAN
OFFICE OF THE VICE PRESIDENT FOR RESEARCH

BEHAVIORAL SCIENCES INSTITUTIONAL REVIEW BOARD
HEALTH SCIENCES INSTITUTIONAL REVIEW BOARD
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E-MAIL: irbhs@umich.edu WEBSITE: www.irb.research.umich.edu

Dr. David Williams
Survey Research Center
3352 ISR
1248

Dear Dr. Williams:

The Behavioral Sciences Institutional Review Board (IRB) has reviewed and approved your research proposal involving human subjects. The IRB determined that the research and its procedures are compliant with appropriate guidelines, state and federal regulations, and the University of Michigan's Federal Wide Assurance (FWA00004969 Expiration 6/12/06) on file with the Department of Health and Human Services (HHS).

Please remember that approval must be obtained for changes in procedures or consent document(s) related to your research proposal. If changes are contemplated, they must be approved prior to initiation of the modified procedures.

The approval period for this project is for a period of one year from the approval date listed below, or a shorter period, if specified. Please note your expiration date. Approximately three months prior to the expiration date, you will be notified so that your renewal application can be prepared, submitted, and reviewed in a timely manner without interruption in the approval status of this project. You must allow up to six weeks for the review process. If you allow your approval to lapse, no work may be conducted on this project until appropriate approval has been obtained.

You are also required to inform the IRB of all unanticipated or adverse events (i.e., physical, social, or emotional injury) as soon as possible after the event. The forms necessary for modifications and adverse event reporting can be obtained on the IRB website at <http://www.irb.research.umich.edu>.

Sincerely,

Daphna Oyserman, Ph.D.
Co-chair, Behavioral Sciences Institutional Review Board

cc: DRDA

PROJECT TITLE: Work and Well-Being of Speech-Language Pathologists
PROJECT APPROVAL DATE: 10/28/2003 TO EXPIRATION DATE: 10/27/2004
SOURCE OF FUNDS: N/A, N/A
IRB FILE NUMBER: B03-00003480-1

To obtain related documents: <http://www.irb.research.umich.edu>

Appendix B
Survey Consent Document

WESTERN MICHIGAN UNIVERSITY

H. S. I. R. B.

Approved for use for one year from this date:

NOV 03 2003

x *May Zagony*
HSIRB Chair

Dear Colleague:

As you are well aware, the role of the *school-based* speech-language pathologist (SLP) is becoming increasingly complicated, as SLPs nationwide are being asked to work with caseloads that are larger, more medically involved, and more culturally diverse than ever before. This survey hopes to capture some of your feelings regarding these changes, as well as document strategies you are using to cope with the challenges of an increasingly diverse clientele.

You are one of a number of SLPs in Michigan whose name was selected from the membership list of the Michigan Speech-Language Hearing Association because you indicated 'public schools' as your primary work setting. We are sending you this survey because we believe that your membership in your state's professional organization is indicative of your commitment to the growth of this profession. The survey is comprised of multiple choice, fill-in the-blanks, and open-ended questions regarding your work practices and stress and health; it should take approximately 20 minutes to complete. Your replies will be kept completely confidential, and no individual responses will be shared or reported. You may choose to *not* answer any question and simply leave it blank, or not participate. Returning the survey indicates your consent for use of the answers you supply.

This study is being conducted as a research partnership between researchers at the University of Michigan (U of M) and Western Michigan University (WMU). Whereas the U of M will be specifically responsible for mailing and collecting the surveys, researchers at both institutions will collaborate to analyze the information and disseminate the results. The research is also being conducted as part of the doctoral dissertation requirements of Lena G. Caesar at Western Michigan University's Department of Educational Studies.

The enclosed \$2 bill is only a small token of our appreciation for your willingness to assist us in conducting this important study. Your diligent response to all the questions is extremely valuable to us and the other SLPs like yourself who may benefit from this research. If you have any questions, please feel free to contact any of the names listed below. The Human Subjects Institutional Review Board (269-387-8923) or the Office of the Vice President for Research at WMU (269-387-8298) will also be happy to answer your questions.

This consent document has been approved for use for one year by the HSIRB as indicated by the stamped date and signature of the board chair in the upper right corner. Do not participate if the stamped date is more than one year old.

Thank you for your participation.

Lena G. Caesar, M.S., CCC-SLP
Doctoral Student
(269) 471-6369

Paula D. Kohler, Ph.D.
Research Investigator
(269) 387-5955

David R. Williams, Ph.D., M.P.H.
Research Investigator
(734) 936-0649

Appendix C
Pilot Study Rating Form

Survey Rating Form

Dear Colleague,

Thanks for taking the time to fill out this survey. If you are willing to take another moment, we would appreciate your filling out the 'report card' below.

1. Clarity of Questions?

- i. Very clear
- ii. Mostly clear
- iii. Mixed
- iv. Mostly unclear
- v. Very unclear

Questions you would reword? _____

2. Interest level of topics?

- i. very interesting
- ii. mostly interesting
- iii. mixed
- iv. mostly uninteresting
- v. very boring

Questions you would add/delete? _____

3. Survey length?

- i. too short
- ii. quite short
- iii. about right
- iv. a bit too long
- v. too long

4. Time spent?

_____ minutes

5. Reactions to Question 23:

In the context of bilingual assessment, how would you rate the importance of the following practices? (1 = Very important; 2 = Important; 3 = Not important)

Performing bilingual assessments	<u>VI</u>	<u>I</u>	<u>NI</u>
a. with formal <u>and</u> informal measures	1	2	3
b. in English <u>and</u> students' native language	1	2	3
c. by gathering information from a <i>variety of sources</i>	1	2	3
d. by observing the child in a <i>variety of contexts</i>	1	2	3

6. Please use the back of this form to add any additional comments.

Appendix D

Work and Well-Being SLPs Survey



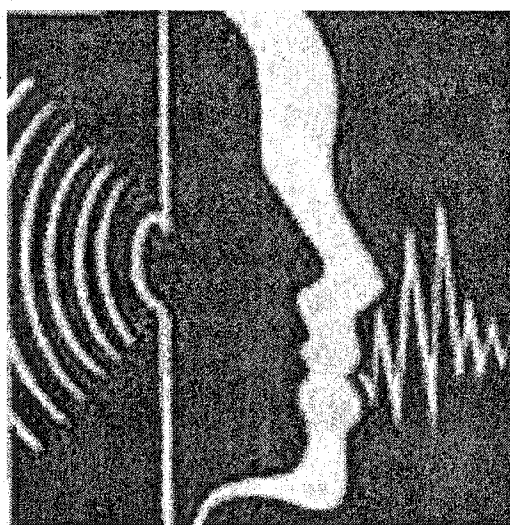
WESTERN MICHIGAN UNIVERSITY



The University of Michigan

Institute for Social Research
426 Thompson St.
Ann Arbor, MI 48104-1248

Work and Well-Being of Speech-Language Pathologists



This questionnaire seeks to capture vital information about the work and lives of school-based speech-language pathologists. Your participation is completely voluntary, and your answers will be kept strictly confidential. If you should come to any question that you don't want to answer, please go to the next question. We think that you'll find the questions interesting and we greatly appreciate your participation.

Section 1 - Clinician Background and Work Setting

First, tell us a little about your work experience and setting.

- Q.1 Are you a school-based speech-language pathologist (SLP) employed in the State of Michigan?
 _____ YES. PROCEED TO THE NEXT QUESTION.
 _____ NO. STOP! KINDLY RETURN THE QUESTIONNAIRE IN THE ENVELOPE PROVIDED.
- Q.2 How many years, all together, have you worked as a *school-based* speech-language pathologist? _____ YEARS
- Q.3 How long have you worked as a speech-language pathologist in your current employment setting? _____ YEARS
- Q.4 Is your current employment full-time or part-time?
 _____ FULL-TIME (MORE THAN 30 HOURS PER WEEK)
 _____ PART-TIME (NUMBER OF HOURS PER WEEK: _____)
- Q.5 Which of these terms best describe the setting(s) where you provide SLP services? (*circle all that apply*)
- | | | |
|----------------|----------------------|---------------------------------|
| 1. Pre-school | 2. Elementary School | 3. Middle School or Junior High |
| 4. High School | 5. Other | |
- Q.6 Which geographic region best describes the location of the ISD in which you are currently employed?
 _____ 1. MSHA REGION 1 (UPPER PENINSULA & NORTHERN MICHIGAN)
 _____ 2. MSHA REGION 2 (MICHIGAN'S THUMB)
 _____ 3. MSHA REGION 3 (SOUTHWESTERN MICHIGAN)
 _____ 4. MSHA REGION 4 (SOUTHEASTERN MICHIGAN)
- Q.7 What is the approximate percentage of *job time* that you spend in the following activities? (*Percentages should add up to 100*)
 _____ 1. MEETINGS (IEP, PARENT, SCHOOL, ETC)
 _____ 2. THERAPY OR CLASS PREPARATION
 _____ 3. DIRECT STUDENT CONTACT
 _____ 4. PAPERWORK
 _____ 5. OTHER _____

Q.8 How much *weekly* time outside of work do you spend doing work-related activities?

- ☐ 1. 1 – 5 HOURS
☐ 2. 6 – 10 HOURS
☐ 3. 11 – 20 HOURS
☐ 4. MORE THAN 20 _____ (WRITE IN SPECIFIC NUMBER)

Q.9 When you have a significant problem at work, who can you count on for support?
(Check all that apply)

- ☐ 1. SPECIAL EDUCATION DIRECTOR
☐ 2. SPECIAL EDUCATION COORDINATOR
☐ 3. SCHOOL PRINCIPAL
☐ 4. TEACHERS
☐ 5. SCHOOL SECRETARY
☐ 6. MY SLP PEERS
☐ 7. OTHER _____

Q.10 Overall, how much do you enjoy doing your work?

- ☐ 1. A GREAT DEAL
☐ 2. QUITE A BIT
☐ 3. SOME
☐ 4. A LITTLE
☐ 5. NOT AT ALL

Q.11 In general, how often do you feel bothered or upset in your work?

- | | | | |
|-----------|--------------|-----------|----------|
| 1. Always | 2. Sometimes | 3. Rarely | 4. Never |
|-----------|--------------|-----------|----------|

Q.12 On the whole, how satisfied are you with the work you do?

- | | | | |
|----------------------|--------------------------|--------------------------|----------------------------|
| 1. Very
satisfied | 2. Somewhat
satisfied | 3. Not very
satisfied | 4. Not at all
satisfied |
|----------------------|--------------------------|--------------------------|----------------------------|

Q. 13 Now, we're going to list some things that people tell us about their work. After each statement, please indicate how much you agree or disagree with these statements.	Strongly Agree	Agree	Disagree	Strongly Disagree
a. My job allows me to make a lot of decisions on my own.	1	2	3	4
b. I get to do a variety of things on my job.	1	2	3	4
c. I am not required to do excessive amounts of work.	1	2	3	4
d. I have enough time to get the job done.	1	2	3	4
e. In my work I am free from conflicting demands that others make.	1	2	3	4
f. My job leaves me too tired and stressed to participate in activities with my friends.	1	2	3	4

Section 2 – Caseload Composition

The next questions help us obtain a picture of your current caseload. Please base your responses to these questions on the characteristics of your caseload during the current school year (2003-2004).

Q.14 How many students are on your current caseload? _____(NUMBER)

Q.15 Of the total number of children in your caseload, how many students *primarily* receive services in the following areas?

- _____ 1. ARTICULATION
- _____ 2. HEARING LOSS (AURAL REHABILITATION)
- _____ 3. FLUENCY
- _____ 4. LANGUAGE
- _____ 5. VOICE
- _____ 6. OTHER _____

Q. 16 Of the total number of children on your caseload, how many would you place in the following severity categories?

- _____ 1. MILD
- _____ 2. MODERATE
- _____ 3. MODERATELY-SEVERE
- _____ 4. SEVERE

- Q.17 What is the *average* duration and frequency of your therapy sessions?
 _____ MINUTES _____ TIMES PER WEEK
- Q.18 How many students on your current caseload are bilingual?
 _____ (SPECIFY NUMBER OF STUDENTS)
- Q.19 How many children of *migrant* farmworkers have received SLP services during the
 current school year?
 _____ (SPECIFY NUMBER OF STUDENTS)
- Q.20 What is the estimated percentage of *bilingual* students in the school(s)
 where you currently conduct therapy? (If you work at more than one
 school, base your answer on the school where you work the most hours)
 _____ PERCENT
- Q.21 Which of the following languages are spoken among the bilingual
 students you serve? (*check all that apply*).
- | | |
|------------------|----------------------|
| _____ 1. ARABIC | _____ 5. LAOTIAN |
| _____ 2. CHINESE | _____ 6. SPANISH |
| _____ 3. KOREAN | _____ 7. OTHER _____ |
| _____ 4. FRENCH | |

Section 3 – Language Proficiency and Training

The next questions are about your language proficiency and training.

- Q.22 Are you comfortable speaking a language other than English?
 _____ YES; SPECIFY THE LANGUAGE (S): _____ ,
 _____ NO (SKIP TO 23b.)

Q.23 Please indicate how strongly you agree or disagree with the following statements:	Strongly Agree	Some-what Agree	Some-what Disagree	Strongly Disagree
a. I speak a language other than English with enough fluency to conduct bilingual assessments with the students I work with.	1	2	3	4
b. My graduate education provided me with sufficient <i>theoretical knowledge</i> about doing language evaluations with bilingual students.	1	2	3	4
c. My graduate education provided me with sufficient <i>practical experience</i> about doing language evaluations with bilingual students.	1	2	3	4
d. The availability of continuing education in the area of bilingual assessment is adequate to my needs.	1	2	3	4
e. In my opinion, I am qualified to significantly contribute to the decision-making process regarding bilingual students' <i>eligibility</i> for special education services.	1	2	3	4

Section 4- Assessment Procedures & Practice

Q. 24 The next questions are about formal and informal language assessment procedures. For each procedure, rate how often you use it to assess English-speaking children.	Often	Sometimes	Rarely	Never
a. Expressive One-Word Picture Vocabulary Test	1	2	3	4
b. Boehm Test of Basic Concepts	1	2	3	4
c. Test of Language Development (TOLD – P or I)	1	2	3	4
d. Parent and/or Teacher Interviews	1	2	3	4
e. Clinical Evaluation of Language Functions (CELF)	1	2	3	4
f. Informal Classroom Observation of Language Skills	1	2	3	4
g. Pre-school Language Scale (PLS)	1	2	3	4
h. Dynamic Assessment (using a test-teach- retest approach)	1	2	3	4
i. The WORD Test	1	2	3	4
j. Structured Photographic Expressive Language Test	1	2	3	4
k. Expressive Vocabulary Test (EVT)	1	2	3	4
l. Test of Problem Solving (TOPS)	1	2	3	4
m. Detroit Test of Learning Aptitude (DTLA)	1	2	3	4
n. Language Processing Test	1	2	3	4
o. Receptive One-Word Picture Vocabulary Test	1	2	3	4
p. Assessing Semantic Skills Through Everyday Themes (ASSET)	1	2	3	4
q. Informal Observation	1	2	3	4
r. Test for Auditory Comprehension of Language	1	2	3	4
s. Language Sampling	1	2	3	4
t. Peabody Picture Vocabulary Test (PPVT)	1	2	3	4
u. Other: _____	1	2	3	4

Q.25 Please list below the 5 tests and/or informal procedures which you use most frequently with English-speaking children.

NAME OF TEST OR INFORMAL PROCEDURE

1. (USED MOST OFTEN) _____
2. _____
3. _____
4. _____
5. (USED LEAST OFTEN) _____

Questions 26-28 apply to your work with *bilingual children only*. If you do NOT have bilingual students on your caseload, skip to Question 29.

- Q.26 Please list below the five tests and/or informal procedures which you use most frequently to test *bilingual* children. Then indicate (a) the language of each test or measure, (b) whether you administered it yourself or used an interpreter, and (c) whether the procedure was adapted.

Name of Test or Informal Procedure

	Language of test?	Interpreter?		Adapted?	
		Yes	No	Yes	No
1. (used most often)		1	5	1	5
2.		1	5	1	5
3.		1	5	1	5
4.		1	5	1	5
5. (used least often)		1	5	1	5

Q. 27 Please indicate how frequently you use each of the following methods when testing <i>bilingual</i> children.	Often	Some-times	Rarely	Never
a. I use a combination of formal and informal measures.	1	2	3	4
b. I assess students in English <u>and</u> in their native language.	1	2	3	4
c. I gather information from varied sources including teachers, parents, and other family members.	1	2	3	4
d. I observe the child in a variety of contexts including the classroom, playground, the home, etc.	1	2	3	4
e. I use interpreters to assist me in assessing bilingual children.	1	2	3	4

Q.28 Next, we would like you to indicate how important each of the following is to you when testing <i>bilingual</i> children.	Very Important	Somewhat Important	Not too Important	Not at all Important
a. Obtaining information regarding which language the child is <i>more comfortable</i> speaking (Language Proficiency).	1	2	3	4
b. Obtaining information about <i>how easily</i> the child learns a new language (Language Learning Capacity).	1	2	3	4
c. Obtaining an indication of the language the child <i>speaks most</i> of the time (Language Dominance).	1	2	3	4
d. Obtaining information regarding <i>how best the child learns</i> a new language (Language Learning Style).	1	2	3	4
e. Being able to determine whether a child's difficulties result from a <i>language difference</i> <u>or</u> a <i>language disorder</i> .	1	2	3	4
f. I adapt existing English measures for use with bilingual children.	1	2	3	4

Section 5 - Health and Stress

The next questions are about your health, stress and well-being.

Q.29 In general, how would you rate your health? Would you say your health is

1.Excellent	2.Very good	3. Good	4. Fair	5. Poor
-------------	-------------	---------	---------	---------

Q.30 During the past 30 days, how many days out of 30 were you unable to work or carry out your normal activities because of problems with either your physical health, your mental health, or use of alcohol or drugs? _____ DAYS

Q.31 During the past 30 days, how many days out of 30 were you able to work and carry out normal activities, but had to cut down on what you did or not get as much done as usual because of problems? _____ DAYS

Q.32 Now we have some questions about people in your life. How often are you in contact with any members of your family—that is, any of your brothers, sisters, parents, or children who do not live with you—including visits, phone calls, letters, or electronic e-mail messages?

1. Never	2. Less than once a month	3. Once a month	4. 2 to 3 times a month
5. Once a week	6. Several times a week	7. Every day	

Q.33 How often are you in contact with your friends?

1. Never	2. Less than once a month	3. Once a month	4. 2 to 3 times a month
5. Once a week	6. Several times a week	7. Every day	

Q.34 For the next questions, think of your relationships with all your family members and friends.	A great deal	Quite a bit	Some	Not at all
a. How much do your family members make you feel loved and cared for?	1	2	3	4
b. What about your friends?	1	2	3	4
c. How much do you feel your family members make too many demands on you?	1	2	3	4
d. What about your friends?	1	2	3	4

Q. 35 Thinking of all your friends and family (including your spouse/partner, children, and parents) is there anyone in your life with whom you can really share your very private feelings and concerns?

1. Yes

5. No

Q.36 The next statements are about the way different people may view their own lives. Please indicate how strongly you agree or disagree with each one.	Strongly Agree	Somewhat Agree	Somewhat disagree	Strongly Disagree
a. I can do just about anything I really set my mind to do.	1	2	3	4
b. There is really no way I can solve some of the problems I have.	1	2	3	4
c. I often feel helpless in dealing with the problems of life.	1	2	3	4
d. What happens to me in the future mostly depends on me.	1	2	3	4

Q.37 Please take a minute to think about the past 30 days. From time to time, all employees experience different feelings. Below is a list of statements that express these feelings. In the past 30 days, about how <u>often</u> did you feel...	Often	Sometimes	Rarely	Never
a) ...so sad nothing could cheer you up?				
b) ...nervous?				
c) ...restless or fidgety?				
d) ...hopeless?				
e) ...that everything was an effort?				
f) ...worthless?				

Q.38 How much of the time do you feel frantic because you have too much to do?

1. Often	2. Sometimes	3. Rarely	4. Never
----------	--------------	-----------	----------

Q.39 The next questions are about your usual sleep habits. During the past month, how would you rate your sleep quality overall?

1.Excellent	2. Very good	3. Good	4. Fair	5. Poor
-------------	--------------	---------	---------	---------

Q.40 During the past month, excluding naps, how many hours of actual sleep did you get at night on average? (This may be different from the number of hours you spent in bed) _____ (HOURS OF SLEEP PER NIGHT)

Q.41 The next questions are about stressful experiences in the past year. During the past 12 months have you had any serious problems or difficulties...	Yes	No	N/A
a. ...at work?	1	5	6
b. ...in your relationship with your spouse/partner?	1	5	6
c. ...in your relationship with your child(ren)?	1	5	6
d. ...in your relationship with other family members or close friends?	1	5	6
e. ...with crime, the police or legal matters?	1	5	6
f. ...with money/finances?	1	5	6
g. ...with providing care or support for aging parents?	1	5	6
h. ...with balancing work and family demands?	1	5	6

Q.42 In the past 12 months, did you experience any of the following events:	Yes	No
a. A serious injury or illness?	1	5
b. The death of anyone close to you?	1	5
c. Did someone close to you experience a serious illness, injury, physical attack or assault?	1	5

Section 6 - Demographic Background

The next questions are about your background. In studies like these we like to compare the experiences and health of people of varying backgrounds.

Q.43 What is your marital status?

1. Married	2. Separated	3. Divorced	4. Widowed	5. Never married
------------	--------------	-------------	------------	------------------

Q.44 What is your age? _____

Q.45 What is your gender?

- _____ 1. MALE
 _____ 2. FEMALE

Q.46 What is your racial or ethnic background?

- _____ 1. BLACK OR AFRICAN AMERICAN
 _____ 2. AMERICAN INDIAN OR ALASKAN NATIVE
 _____ 3. ASIAN
 _____ 4. WHITE OR CAUCASIAN (NOT HISPANIC)
 _____ 5. LATINO/HISPANIC
 _____ 6. NATIVE HAWAIIAN OR OTHER PACIFIC ISLANDER
 _____ 7. OTHER _____

Q.47 What is the highest degree you have earned?

- _____ 1. BACHELOR'S DEGREE (BA, BS, ETC)
 _____ 2. MASTER'S DEGREE (MA, MS, ETC)
 _____ 3. PH.D OR ED.D
 _____ 4. OTHER ADVANCED DEGREE _____

Q.48 Which certificate(s) or license(s) do you currently hold?

(Check all that apply)

- _____ 1. MICHIGAN TEACHER CERTIFICATION
 _____ 2. CCC-SLP
 _____ 3. CCC-SLP/A
 _____ 4. OTHER _____

Q.49 Check the box corresponding to the total annual income for yourself and all members of your family living with you?

1. Less than \$20,000	2. \$20,000- \$39,999	3. \$40,000- \$59,999
4. \$60,000- \$79,999	5. \$80,000- \$99,999	6. \$100,000 or more

Q.50 What would you say are the two most *rewarding aspects* of your work as a school-based SLP?

1.

2.

Q.51 On the other hand, what would you say are the two most significant *challenges* confronting school-based SLPs?

1.

2.

This completes the questionnaire. Thank you for your time and help. Is there anything else you would like to tell us?

Thank you very much for your participation in our study!

August 13, 2004

Dr. David R. Williams
Institute for Social Research
University of Michigan
P.O. Box 1248
Ann Arbor, MI 48106-1248

Re: Permission to Reproduce Survey

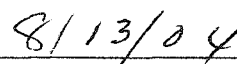
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David R. Williams, Ph.D., M.P.H.



Date

Sincerely,



Lena G. Caesar
Doctoral Candidate
Western Michigan University

August 13, 2004

Dr. Paula D. Kohler
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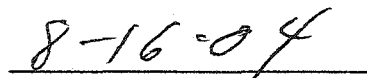
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Paula D. Kohler, Ph.D.



Date

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