DOCUMENT RESUME

ED 260 859 RC 015 389

AUTHOR Cole, Jack T.; De Leon, Josie
TITLE An Investigation into the Development and Validation of an Assessment Procedure for Identifying Language Disorders in Spanish/English Bilingual Children.
INSTITUTION New Mexico State Univ., Las Cruces. Coll. of Education.
SPONS AGENCY Special Education Programs (ED/OSERS), Washington, DC.
PUB DATE Jul 85
GRANT G008430022
NOTE 217p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC09 Plus Postage.
DESCRIPTORS *Bilingual Students; Children; Communication Disorders; Comparative Analysis; Educational Diagnosis; Elementary Education; English (Second Language); Language Dominance; *Language Handicaps; Questionnaires; *Spanish Speaking; *Testing; *Test Validity
IDENTIFIERS New Mexico (South)

ABSTRACT

Sixty bilingual Mexican American children (20 language disorderd, 20 not qualifying for placement, 20 comparison) between the ages of 7-10 from 2 school districts in southern New Mexico participated in the study to develop and validate an assessment procedure to determine language disorders in Spanish/English bilingual children. An ex post facto approach was used in the validation of the assessment procedure which included subject testing, parent interviews, and teacher checklists. Five experts reviewed the assessment data. The investigation did not produce any recommendations on evaluation measures that appeared to be more viable than others in discriminating differences in the language disordered and non-language disordered bilingual child. The findings demonstrated the complexity of attempting to develop and validate a procedure and the obvious need to establish some validity in the diagnosis of language disorders in Spanish/English bilingual children. The study concluded that it will take much research to ultimately determine what diagnosticians should include in the evaluation. Fourteen appendices include correspondence and forms used in the study. (NEC)

An Investigation into the Development and Validation of an Assessment Procedure for Identifying Language Disorders in Spanish/English Bilingual Children

Jack T. Cole Ph.D.
Project Director
Department of Special Education
New Mexico State University
Las Cruces, New Mexico

Josie De Leon Ph.D.
Project Coordinator
Department of Curriculum & Instruction
New Mexico State University
Las Cruces, New Mexico

July 1985

This study was made possible by a grant from the U.S. Department of Education, Office of Special Education, Grant #G008430022, Project #023BH40068.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Diagnostic personnel often find it difficult to identify language problems in children. This difficulty is due to differences in the perceptions of what constitutes language that are reflected in what is assessed, the inadequacy of some test instruments that are designed for the assessment of language deficiencies, and the differences in the types of information that are obtained from different language tests (Oller, 1983). For children with a primary language other than English, this difficulty becomes even more problematic. Diagnostic personnel may become unsure whether what appears to be a language problem is due to second language acquisition and/or an actual language deficiency.

Erickson (1981) states that the procedures and instruments used in determining language disorders in bilingual children can affect the accuracy of the diagnosis. Without consistent and knowledge-based procedures for determining language disorders in bilinguals, mistakes in assessment and misclassifications will occur.

Public Law 94-142 proposes that testing to determine the placement needs of children should be

nondiscriminatory and should take into account the language of the children. Without a validated procedure for language assessment it is unclear what might be considered discriminatory. P.L. 94-142 indicates that the bilingual child should be tested in both languages. Without a validated procedure for bilingual children we can only speculate about the role that the child's primary language should play in the language evaluation.

Mattes and Omark (1984) state that a child should be considered eligible for speech and language therapy only if there is demonstrated evidence of a handicap requiring such services. They indicate that it is extremely difficult to determine whether a bilingual child's communication problem is due to temporary competition between the two languages of his/her environments or whether it is a handicap, which can be considered pathological. The reason professionals are not able to readily distinguish the difference is because there has been little research done that examines the differences in the diagnostic profiles of bilinguals requiring language services and those who are in the process of learning English as a second language. Wyszewianski-Langdon (1977) is the only researcher who has analyzed the differences between bilinguals who are language disordered and those who are not. This study

was done with Puerto Rican children and its generalizability to Mexican American children is somewhat limited because there is a difference in the Spanish spoken by the two groups. Taylor and Payne (1983) state that it is necessary to determine whether a speech and language assessment procedure is culturally valid and nonbiased and can effectively discriminate pathological and nonpathological language behavior. They also suggest that widely accepted procedures do not exist to assess the linguistic competence of children who are culturally and linguistically different. Despite the stipulations about the assessment of culturally and linguistically different children in PL 94-142, little has been done in the area of test improvement and in examining overall evaluation procedures with children (Taylor & Payne, 1983).

Problem Statement

There is no validated procedure for the determination of language disorders in Spanish/English bilingual children.

Statement of Purpose

The main objective of this study is to develop and validate a procedure for the assessment of language

disorders in Spanish/English bilingual children. The enabling objectives that will lead to the development and validation of the procedure are:

Objective 1. To determine the differences in the diagnostic profiles of the three groups of children.

Objective 2. To determine consistency in agreement among the Diagnostic Groups and the Expert Reviewers.

Objective 3. To determine whether the discriminant analysis will match Expert Decisions or the child's initial group classification.

Objective 4. To determine whether the assessment data can predict classroom language use as perceived by the teacher.

Objective 5. To determine whether there are statistically significant differences between the three groups of children.

Objective 6. To determine what types of information are most useful in the identification process: (a) what type of assessment data are most useful; (b) what other type of information was necessary (i.e., child data, family history, and developmental data).

Research Questions

(1) What are the differences in the diagnostic profiles of those Spanish/ English bilingual children with

language disorders, those with language difficulties because of a language difference, and those children who appear to have no problem with language?

(2). Will there be at least 90 percent agreement between the Diagnostic Groups and the Expert Reviewers as to which Spanish/English bilingual children are language disordered and which are not?

(3) Will the discriminant analysis place the child in the classification categories determined by the Expert Reviewers or the child's initial categorization?

(4) Can the assessment data predict classroom language performance?

(5) Are there statistically significant differences between the three groups of children included in the study on the basis of the assessment data?

(6) What types of information are most useful in the identification process?

(7) Is the assessment procedure developed in this study valid in the identification of language disorders in Spanish/English bilingual children?

Delimitations

This study includes the following delimitations:

1. The assessment procedure will only be appropriate where Spanish/English assessments can be performed.
2. Some of the formal assessment instruments used, especially those that are specifically developed for the Spanish-speaking population, may not reflect current thinking about language. They test discrete points.
3. The results on what type of information is most useful in the assessment of language disorders in Spanish/English bilingual children will only be generalizable to those children from similar language and cultural backgrounds as those children included in the study.

Contributions to the Literature

The researcher hoped to examine an area that appears to be crucial and is yet unresolved. Many assessment procedures have been suggested for the determination of language disorders for bilinguals and yet the validity of these approaches has not been determined. The distinction between language differences and language deficits need to be identified by these procedures. Without such distinctions teachers

and diagnostic personnel have reason to be concerned about the diagnosis and placement of bilingual children.

Theoretical contribution

The researcher examined the effectiveness of a multidimensional approach in the assessment of language disorders of Spanish/English bilingual children. Several types of measures were used in this approach including: (1) English and Spanish discrete point tests; (2) teacher and parent reported information on the child's pragmatic use of language; (3) and language samples.

Practical contribution

The researcher expected to validate a procedure that could be useful in the determination of language disorders of bilingual children. The importance of certain types of assessment data in the identification of language disorders in bilinguals would also be useful to diagnostic professionals working with bilingual children. The procedure might also be helpful in the selection of program alternatives for bilingual children who are not affected by a language deficiency but are experiencing difficulty in acquiring English.

Definition of Terms

Assessment. Assessment is the actual administration and scoring of the formal and informal instruments used to test the child's language abilities in a number of linguistic areas.

Bilingual. Bilingual refers to the ability of the child to speak English and Spanish as indicated by the parent, the results of the Home Bilingual Usage Estimate, and the results of the language dominance instrument.

Communicative competence. According to Lucas (1980) communicative competence refers to the speaker's ability to effectively communicate an intentional message so as to alter the listener's attitudes, beliefs, and/or behaviors.

Discrete point measures. Measures which reflect a structuralist approach in which language proficiency is reflected by mastery of discrete points, such as units of phonology, morphology, vocabulary, and syntax (Leeman, 1981).

Educational diagnostician. In New Mexico an educational diagnostician is a person who has received training and is certified to administer tests (IQ, achievement,

processing, and language dominance) to children who are suspected of having a learning problem.

Evaluation. Evaluation refers to the interpretation of the information gathered in the assessment taking into account contemporary theory on communication, first and second language acquisition research, and the linguistic characteristics of the student's community.

Identification. The identification is the process by which it is determined that the child has a language disorder. This is based on the assessment and the evaluative review of both formal and informal methods of assessment used.

Language disorder. A language disorder is the abnormal acquisition, comprehension, or expression of spoken or written language (ASHA, 1980 cited by Damico et al., 1983). In this study only spoken language will be examined because assessments were done in both English and Spanish and the bilingual children only received written instruction in English.

Language dominance. The language that appears to be the dominant as measured by a language dominance measure.

Limited english speaker (LES). A person who speaks a limited amount of English and whose primary language is his/her home language.

Linguistic interference. The negative effects that the first language has on the second language (Ben-Zeev, 1984).

Linguistic transfer. Language transfer refers to the native speaker's use of a form from the mother language when a rule from the language being learned is required (Locke, 1981).

Mexican American. In this study, Mexican Americans are the Spanish-speaking ethnic group who are descendents of Mexican ancestry. They may not necessarily have a Spanish surname.

Morphology. Morphology refers to the structure of grammar that deals with the forms and internal structure of words (Cole & Cole, 1981, p.6).

Non-English speaker (NES). A NES is a person who does not speak any English and speaks only the home language.

Phonology. Phonology refers to the sound system of language (Cole & Cole, 1981).

Pragmatics. Pragmatics refer to the use of language in the context of a communicative act or communicative intent (Bloom & Lahey, 1978).

Syntax. Syntax refers to word order and the way in which words and sequences of words are combined into

phrases, clauses, and sentences (Cole & Cole, 1981, p.4).

Utterance. A self-sufficient unit of meaning in spoken language, preceded and followed by silence or pauses (Wiig & Semel, 1984, p. 668).

CHAPTER II

REVIEW OF RELATED LITERATURE AND RESEARCH

The purpose of this chapter is to review the research and literature that contribute to an understanding in investigating the assessment of language disorders of Spanish/English bilingual children. Four areas are reviewed relating to language and language assessment.

The first area that is reviewed deals with bilingualism and what it entails. The discussion examines some of the early notions of bilingualism and how changes have evolved from those early beliefs. Research dealing with the attributes of a bilingual community are also discussed,

Secondly, the language development of the bilingual child are also discussed. This examination deals with the research that has examined dual language acquisition. Studies that have investigated the English language development of children acquiring English as a second language were are discussed.

The third area focuses on language testing. Included in the discussion are problems related to language testing, which have repeatly been cited in the literature. The progression of the area of language

testing throughout the decades is also discussed.

Finally, a major emphasis is placed on the assessment of language disorders in bilingual children. This includes an examination of literature and research on referrals, problems with the speech and language evaluation, and suggested assessment procedures.

Bilingualism

During the period up to the 1950s, the effects of bilingualism were generally viewed as being negative (Baetens Beardsmore, 1982). It was believed that bilingualism resulted in mental confusion and retardation (Darcy, 1953). However, more recent research (Lambert & Tucker, 1972) has reported that studies of middle-class individuals found that, instead of being handicapped, bilinguals were actually scoring higher than matched monolinguals on IQ and achievement tests. Lambert also indicated that research has not revealed any forms of disturbance or maladjustment that can be attributed to bilingualism. In studies in which negative effects of bilingualism have been reported, the researchers have failed to consider social as well as other variables which could have been responsible for those negative effects. In cases in which the

bilingualism of minority populations was studied, the status of language as a minority language has been ignored along with the impact that this has had on the attitudes and use of the language. ignored.

Baetens Beardsmore (1982) states that the only real problem with bilingualism frequently cited by those studying this subject is "anomie" (also spelled anomy). He describes anomie as the feeling of personal disorientation, anxiety, and social isolation. He states:

> The reaction arises from an inability to resolve the conflicting demands made upon the bilingual individual by the two linguistic-cultural communities in which he finds himself. The very nature of the average bilingual's development implies that the goals after which he is striving will be inaccessible, since the acquisition of perfectly balanced ambilingualism is exceptional. Thus it is that the bilingual who tries to reconcile two divergent linguistic and cultural patterns may find the inaccessible goals presented to him by two of his environments leading to feelings of frustration. (p. 127)

Throughout the world and in the United States when two languages come into contact and bilingualism results, certain phenomena occur (Conklin & Lourie, 1983; Hornby, 1977):

(1) Individuals in the society may react negatively to certain linguistic aspects

which make bilinguals different from other members of the society.

(2) Negative reactions to speech style rather than communicative abilities may occur

(3) The dominant language of the society is often considered more prestigious, "proper," cultured, etc.

(4) Linguistic minority groups are affected by a pressure to shed their native language and embrace the newly acquired one.

(5) Language mixing and language borrowing occurs.

(6) The loss of the native language for those linguistically different individuals becomes the norm (Valdés, 1982).

One of the main problems in understanding the language development of the child under the condition of bilingualism is defining bilingualism and unraveling the definitions proposed by a number of researchers. In the literature, bilinguals are sometimes described as being at one extreme, that is, they possess complete symmetrical native control of two languages. Very few persons, if any, possess such a degree of bilingualism. At the opposite end is the person who possesses at least one language skill (audition, speaking, reading, or writing) to a minimal degree in a second language. Another view has been that a person who possesses at least one language skill in each of two languages is bilingual. Regardless of the definition that is adopted by the researcher, it goes without saying that

bilinguals are quite heterogeneous (García, 1983). Valdés-Fallis (1979) has stated that any definition adopted must take into consideration the diversity that is part of the linguistic as well as sociolinguistic aspects of bilingualism.

A factor that has been mentioned in the literature and may affect the nature of bilingualism in a group is the determination of whether a bilingual's situation is additive or subtractive. Additive bilingualism occurs when individuals receive a number of advantages by becoming bilingual, i.e., self-confidence, intellectual enrichment, the approval of their community or society. Subtractive bilingualism is the form of bilingualism in which the use of two languages results in the loss of some aspect, i.e., self confidence, the importance of the native language, and status. Some psycholinguists believe that subtractive bilingualism leaves linguistic minority groups in psychological limbo, which contributes to their inability to function well in either language (Conklin & Lourie, 1983).

Language Development of Bilingual Children

Dual Language Acquisition

Some of the information that is available concerning dual language acquisition indicates that the

development of both languages can be parallel. Some research contradicts this and indicates that one language may be acquired at a faster rate than the other. The acquisition of two languages can also lead to an "interlanguage" in which the structural aspects of one language can be incorporated into the second language (Damico et al., 1983; García, 1981). The patterns and stages that a child goes through in learning both languages can also be similar (Ervin-Tripp, 1974; Langdon, 1983).

Padilla & Liebman (1975) performed a longitudinal analysis of Spanish-English acquisition in two-three year old bilingual children. The researchers also compared the acquisition patterns of bilinguals and monolinguals. This study analyzed several linguistic variables such a phonology, grammar, syntax, and semantics. They observed similar gains in both languages by the bilinguals, however, the acquisition of linguistic forms in English and Spanish was different. The findings indicate that there may be a different developmental level for the linguistic forms in the in the two languages. They also found that the bilinguals were acquiring two languages at the same rate as monolingual children were acquiring only one. This finding was particularly important since it seemed to

refute the myth that bilingual language acquisition is slower. Another notion that was dispelled in this study was that all bilingual children learning two languages simultaneously are balanced in their use of both languages. This study indicated that these children had a preference of one language over the other.

The concept of dual language learning has in the past been viewed negatively rather than positively affecting the language development of the child. Historically, it was believed that bilingualism slowed down language development (García, 1974). Today the perceptions are not so negative, however, the question of whether learning more than one language influences the rate and/or quality of each language is still asked. The question of linguistic transfer or linguistic interference still remains unanswered. Some studies have examined whether this phenomena occurs, however, these studies have been few and have largely dealt with the possibility of phonemic interference. Evans (1974) found that monolinguals and Spanish-English bilingual did not differ in their English sound discrimination abilities. Spanish had not influenced the Spanish-speakers' aiblity to discriminate between English word pairs containing phonemic combinations that might be

considered difficult for them (such as the "B" and "V" sounds).

Dulay and Burt (1974a, 1974b) have reported that few linguistic errors in English made by children whose native languages varied from Oriental to Western European could be attributed to native language interference. García (1981) states that the findings of the studies examining language transfer and interference indicate the following:

> (1) A linguistic transfer phenomenon is evident in which the specific structures of the "dominant" language influence the developmental quality of the less "dominant" language.
>
> (2) A linguistic transfer phenomenon is evident in which the structures of the two independent language influence the developmental quality of the less "dominant" language.
>
> (3) The specific character of transfer between the languages of the bilingual is not significantly influenced by the simultaneous linguistic development of two languages; the developmental character of each language is similar to that of a native speaker of either language. (p. 12)

Research dealing with the whole issue of dual language acquisition and the language disordered child is less conclusive than what is available on normal children. We know very little about bilingualism and the language development of the language disordered child. Greenlee (1980) states that the lack of information in this area has resulted in the view that learning two languages

complicates the developmental progression of language by the language disordered child.

English Language Development

Several studies have compared the development of English language skills by English monolinguals and Spanish-English bilinguals. Some of the studies have attempted to examine only one aspect of linguistic ability such as receptive or expressive ability. Others have tried to incorporate a more global look at language.

A very early study (Carrow, 1957) in the comparison between the linguistic functioning of bilinguals and English monolinguals indicated that there was no significant difference in the oral language of both groups. The monolinguals did demonstrate a more extensive vocabulary, however, the complexity of the sentence structures was equal to those of the bilinguals.

Another study (Carrow, 1972) concentrated on the receptive language abilities of bilingual Mexican Americans between the ages of 3-10 to 6-9. Carrow used the Auditory Test of Language Comprehension to measure their receptive language in both English and Spanish. Her findings indicate that the bilinguals were very

heterogeneous in their demonstration of receptive ability in both languages. There was a larger proportion of children who scored higher on the English test than on the Spanish test. Older children seemed to do well in both languages.

Glad and her associates (1979) compared the English language acquisition patterns of English monolinguals and Spanish/English bilinguals using the Circus test battery. They were mainly concerned with the acquisition of English grammar. The results of the study indicate that there was little difference demonstrated by bilinguals and monolinguals in the acquisition of verb tense, adjectival inflections, and subject-verb agreement. There was some difference, however, in the acquisition of agent-object direct and indirect relationships.

De Johnson (1976) studied three children between four to five years of age with similar SES, ethnicity, and college educated parents. One child was Spanish monolingual, one English monolingual, and one spoke both Spanish and English. The monolingual children were only exposed to one language at home. Her study is unique in that it is not only a longitudinal study, but it also incorporated a number of measures. She included standardized test, temporal analysis, and spontaneous

speech samples in three different settings. The results indicate that on general language skills as measured by the Language Assessment Battery the bilingual child in this study scored higher. On all other analyses the three children performed approximately the same.

Hernández-Chávez (1983) studied the acquisition of English as a second language by a three year old child. His conclusions state that the child developed both the syntactic structures and the semantic functions essentially independent of the first language. Also, negative transfer and interference occurred. His conclusions were that the acquisition of a second language by the child did not have a harmful effect on either language. Despite the fact that the child spent six to seven hours daily in natural communicative use of English, at the end of nine months the child had hardly mastered some of the most simple semantic and syntactic aspects of English such structures as plurals, modal auxiliaries, or noun possession. On the basis of his study he proposes that it is extremely unrealistic to expect children learning English as a second language to learn enough English in a few months or even in one to two years to be proficient enough to fully meet the linguistic requirements of the classroom.

The studies on the English language development of bilinguals indicate that on the surface, it appears that bilinguals and monolinguals are comparatively equal in their acquisition of English language skills. These studies are not inclusive of all the areas of English competence that should be examined. These studies should also be interpreted with caution since they rely heavily on standardized measures which limit the view of the children's language and its usage.

Despite the increase in studies about the English acquisition of bilinguals there is still no information comparing the ability of English monolingual language disordered children and the language disordered learning English as a second language and their subsequent acquisition of English language skills. Langdon (1983) has stated that the bilingual Spanish/English speaking language disordered children in her study exhibited similar characteristics as the monolingual English speaking children. That is, the bilingual language disordered children were characterized by:

(1) The fact that they made more errors in articulation of single words and connected speech, sentence comprehension, sentence repetition, and sentence expression.

(2) Their performance was not consistent across tasks.

(3) They showed lower language skills in Spanish than their normally developing peers.

(4) Their receptive abilities in English and Spanish were equally poor.

(5) They had difficulty using processing strategies.

(6) They had problems using a language model.

Studies examining the language development of bilingual children have predominantly focused on the language of young children. These studies indicate that bilingualism does not negatively effect these children. Infact, bilinguals progress as well as their monolingual peers in the acquisition of English while maintaining Spanish. There are differences exhibited in language preference, however. These studies have generally examined the language development of "normal" children and studies which analyze the bilingualism of language disordered children are scarce.

Language Testing

Thought about the area of language testing has undergone a considerable amount of change since the late 1940s and the early 1950s when language testing was said to have been in a "prescientific" stage. Between the early 1950s and late 1960s it was considered to be "psychometric-structuralist." From the late 1960s to

the present language testing has become "integrative-sociolinguistic" (Genesse, 1982; Rivera & Simich, 1982).

During the "prescientific" period there was little concern for any type of testing or other important psychometric characteristics of determining language proficiency. The "psychometric-structuralist" concentrated on the assessment of specific language components such as phonemic discrimination, lexicon, and syntax and often consisted of a discrete point testing procedure. Oller and other sociolinguists have been given credit for the present period of an "integrative-sociolinguistic" perspective (Genesse, 1982). This period is concerned mainly with the examination of language as it occurs in the real-life communicative process. Oller (1983) has stated that language cannot be assessed by examining the separate components of language.

The influence and impact by sociolinguistic studies in the area of language and communication have been recognized for a long period of time, however, it has not been until recently that this influence has made reference to language testing (Ornstein-Galicia, 1982). The term "communicative competence," meaning the use of language in a communicative context, has been derived from this particular period and is seen as having a very

significant application in the assessment of language (Mattes & Omark, 1984). While the area of sociolinguistics has certainly had an impact on the present views of the direction that language assessment should follow, it is not certain how to make sociolinguistic language assessment practical (Duron, 1982; Genesse, 1982; Ornstein-Galicia, 1982). Making it practical would be especially important to diagnostic individuals who are concerned with differences in language varieties, who realize that socio-ethnic consideration are important in the language proficiency issue, and who need to make language evaluations practical as well as accurate.

Baecher (1982) has indicated that a dilemma exists in language assessment due to confusion and disagreement about what language assessment should entail. A contributing factor is the plethora of that which are used to describe the language assessment process. Some of the terms include language proficiency, language dominance, language ability, and global language proficiency.

Another problem cited by Simoes (1982) is that a norm may exist for each language group. He states that by using a single norm which normally divides dialect from "standard language" many children may be diagnosed

as language deficient on the basis of the single norm. The solution that he proposes is developing expertise in the identification of "special" situations in the "standard" language and dialect.

Troike (1982) proposes that the meaning of language assessment and what it entails cannot be defined in absolute terms. He describes language assessment in the following manner.

> First, the conception of language which is held will partly determine what is assessed and how it is done, and secondly, the view of appropriate assessment procedures will affect the choice of what is is measured, which for the purposes of assessment becomes a de facto definition of language, i.e., language is what the assessment procedure/instrument measures. Both aspects in turn are strongly affected by the purposes of assessment (p. 3).

Much discussion has transpired in the literature concerning the imperfect nature of language testing, especially language tests dealing with the language proficiency and language dominance of second language learners (Ramírez, 1983). The diagnostician is often faced with a dilemma in diagnosis due to the instruments' shortcomings. It is not possible to wait for the perfect instrument to become available, therefore, an instrument or instruments that are psychometrically flawed must be used. The diagnostician must make judgments despite the fact that the sample of

behavior drawn has certain limitations (Thorndike, 1982).

Assessment of Language Disorders in Bilingual Children

The literature on the assessment process for the determination of language disorders in bilinguals has identified some problems in this process due to the shift in the theory of communication and language. Referrals are also a problem since those making referrals are not always aware of how language differences and a language deficiency can be confused. In order to alleviate the problems that have been identified, a number of suggestions have been made concerning the procedures to follow in the assessment of these children.

Referrals

One of the initial processes of the assessment process is the referral which is normally made by the classroom teacher or someone else working closely with the child. For the bilingual child this presents a problem. Bikson (1974) has demonstrated that teachers are not very accurate in their subjective evaluations.

In Bikson's study, the spontaneous speech evaluations of 144 elementary school Black, Mexican American, and Anglo children were examined by objective measures and subjective teacher evaluations. the objective evaluations included: (1) response length (fluency) or number of words; (2) number of different words used; (3) mean frequency of word recurrence; (4) the standard deviation from mean recurrence rate; and (5) uniformity of speech. Five teachers listened to the tapes of the spontaneous speech and determined the quality of the speech of the children. The objective measures showed that the minority speech performance equalled or exceeded that of the Anglos yet the teachers rated minority speech as inferior and linguistically deficient. They focused on the superficial qualities of the minority children's language and were therefore not able to identify their communicative competence.

Damico and Oller (1980) have demonstrated that when teachers refer children for a speech evaluation based on structural speech information which includes morphology, syntax, subject-verb agreement, tense marking, and pluralizations, they are likely to make more referrals of children having normal language ability. When teachers were trained to view the children's language from a pragmatic perspective and make referrals based on

the children's communicative competence, the referrals for the identification of language deficiencies tended to be more accurate.

These studies indicate that teachers are not trained well enough to make accurate judgments about language deficiences. Bilingual children run a greater risk of being erroneously referred since most teachers have less of an understanding of their speech patterns.

Problems in Testing and Evaluations

In the middle of the language assessment controversy is the difference or deficit issue. This controversy is not new or exclusively an issue of language assessment. The difference or deficit controversy has surfaced in every instance in which minority or culturally different people have been compared with majority individuals or a particular standard. This point has been reviewed by Cole and Bruner (1971) and Lesser, Fifer, and Clark (1972).

Terrell and Terrell (1983) discuss the difference/deficit issue in reference to the language of Black children. They purport that more studies support the difference hypothesis than the deficit hypothesis with this group. They also state that diagnostic

personnel have a tendency to do one of two things when reconciling the difference/deficit issue.

> Some language specialists assume that all minority group children are normal dialect speakers and adopt a "do not test" or "hands off" position. Others may use standardized tests but overcompensate for a child's dialect by assuming that all of the child's communicative behaviors, even if they are true disorders, are characteristics of the child's normal and different linguistic style. Other language specialists may not have sufficient knowledge of the systematic communicative patterns characteristic of subcultures in this society and may therefore undercompensate in their interpretation of dialect-speaking children's performance on a language test (i.e., they assume that these children have linguistic problems). (p. 3)

The results of the dilemma are underrepresentation or overrepresentation of culturally and linguistically different children in speech and language programs. Both are detrimental situations which need to be avoided for any group of children.

Two studies have closely examined the profession responsible for the evaluations determining language disorders in children. Mattes (1982) surveyed 154 public school speech language pathologists in the Los Angeles area. His survey revealed that the number of speech language pathologists with sufficient fluency in Spanish to assess Spanish-speaking children was inadequate to meet the needs of the Hispanic population in the area. Carpenter (1983) had similar findings with

a more extensive California sample (n=329). She found that while more than half of the sample reported that they spoke a language other than English, few stated that they were fluent enough to be able to effectively conduct evaluations in that language. The lack of availability of bilingual speech language pathologists to assess bilingual children is a problem in assessment that cannot be denied.

In the screening and evaluations for language disorders the speech language pathologist must determine whether the child deviates from the norm in his language skills. Determining this becomes a crucial issue for the bilingual child since it has already been established that there are few normative studies that relate the Spanish and English language skills of bilinguals in the United States. The normative data on which to base the determination of language deficiencies are not available and the speech language pathologist is left to either use translated tests with English norms or to merely test the child in English. In order for bilingual children to be considered language disordered, they must be considered language delayed in their primary and secondary language (ASHA, 1983; Langdon, 1983; Mattes & Omark, 1984). Translated tests and the use of English norms are not helpful in determining that

delay. It would seem that the necessary norms could be obtained and that the problem could thus be solved. García (1981) states that the heterogeneity of the Spanish-speaking population in this country makes it almost impossible to obtain them. Codeswitching, amount of Spanish spoken at home, the influence of SES on language dialect differences, and phonological differences all add to the burden of obtaining those norms.

When norms in Spanish and norms in English are used there is yet another problem. Native language loss is a normal phenomenon among bilinguals (Mattes & Omark, 1984; Valdés, 1982). Bilingual children who experience language loss in their native language may demonstrate language test scores in their native language that are similar to those of bilingual children with language disorders (Mattes & Omark, 1984). Because English is acquired as a second language and these children have not had enough opportunity to use English as the English monolingual children included in the test norms, they may also score low on the English tests. The bilingual assessment which is intended to be fair may, ultimately not discriminate between pathological and nonpathological language behavior (Mattes & Omark, 1984).

It has already been established that the theories of language have changed drastically in the past thirty years. Language assessment has progressed from "pre-scientific" to structuralist to integrative-sociolinguistic. Unfortunately, the instruments that are used to assess language have not progressed with the trends and theoretical shifts determined by empirical research. By definition testing is a very structuralist process in and of itself. It comes as no surprise that the integrative-sociolinguistic approach has not been incorporated in the process and test instruments do not reflect that approach. Test instruments continue to assess language ability in discrete parts. With instruments reflecting an outdated language perspective, the question remains whether diagnostic personnel can adequately make judgments on the basis of information derived from them.

Another problem in the assessment procedure is determining whether to test in Spanish, English, or both languages. The determination of language proficiency has been rather elusive with the methods that are available (ASHA,1983). Researchers in the area of language are still struggling to establish the meaning of language proficiency. The majority of tests used to assess language proficiency view language in a very

structured sense (ASHA, 1983: Canale, 1983; Erickson & Omark, 1981; Mattes & Omark, 1984; Oakland, 1977; Oller, 1983).

Language instruments for bilingual students are not only outdated from a theoretical perspective, but are also poorly constructed. Norming samples are relatively small and validating procedures are often not reported (Oakland & Matusek, 1977). In an evaluation text on oral language tests for bilingual students by Silverman, Noa, and Russell (1978), a large number of instruments did not report any validity or reliability data. These problems make the interpretation of the results extremely difficult.

Suggested Assessment Procedures

Because most assessment instruments are discrete point measures and current language assessment literature recommends a holistic and pragmatic assessment of language, approaches that view language in parts and those that are holistic must be combined. Diverse testing and diagnostic procedures are important in the diagnosis of language disorders in bilingual children.

Langdon (1983) has suggested an assessment procedure that includes the following methods:

(1) The use of informal methods such as school records and a parent/guardian interview.

(2) The determination of language dominance.

(3) The assessment of the bilingual child in the primary or preferred language.

(4) The assessment of receptive abilities including vocabulary, concepts, ability to follow instructions, comprehension oral sentences and paragraphs.

(5) The evaluation of expressive abilities including the use of complete correct sentences, ability to express ideas in logical order, the expanison of ideas, and the ability to sustain a conversation.

(6) The examination of pragmatic skills.

Langdon used this procedure in the determination of language disorders among bilingual Puerto Ricans.

Terrell and Terrell (1983) state that providing a nonbiased language assessment parallels that of a traditional assessment process. Some of the differences follow:

(1) Traditional assessments are more dependent on the cultural and linguistic orientation of the the examiner whereas nonbiased assessments are dependent on the cultural and linguistic orientation of the child being examined.

(2) The examiner must be familiar with the examinee's culture and must have developed an "ear" for the dialect of the child's group.

(3) The examiner must have analyzed his/her own attitudes and stereotypes concerning the

child's values, ethnic identity, language style, and appearance.

Taylor and Payne (1983) have suggested that sources of bias be identified in any assessment. They include models which have been proposed in the literature and can be applied to a speech and language assesment. They also suggest test modification as an alternative in eliminating test bias. They feel that even though most examiners do not like to alter standardized test procedures there are professionally ethical techniques that should be considered. These techniques include identifying problems with the instrument that are sources of potential discrimination and apply corrective remedies to them. The examiner should also conduct an item analysis to determine item bias against particular dialects. They suggest that these items be changed to reflect the child's appropriate dialect.

The American Speech and Hearing Association has been the most instrumental in stipulating procedures for bilingual children who are suspected of having speech and language disorder (ASHA, 1983). These procedures for bilingual children between the ages of 6 to 10.11 are for the use of both formal and informal methods. Informal methods include language sampling, the analysis

of communication functions, and the use of informal probes. Formal procedures can include adapted instruments, Spanish tests, translated tests, and the use of formal English tests. The clinician is encouraged to use any variation of these methods.

Mattes and Omark (1984) suggest that tests be used with language samples. They view the language sample as important because it considers the effectiveness of the child's communication during natural speaking acts.

In the examination of the procedures suggested for the language assessment of bilingual children it becomes obvious that diverse opinions exist as to what the focus of evaluations should be and what they should encompass. Some suggestions border on traditional views of language and can thereby be considered more structuralist while others in their attempt to deal with the shortcomings of language testing have almost become "prescientific." Most of the literature suggests that traditional methods as well as some procedures which incorporate more recent views of language be used. There is agreement that the testing of bilingual Spanish-speaking children include English and Spanish testing as needed. The literature also appears to consistently relate that informal and formal assessment techniques need to be combined.

A major problem in the suggested procedures is that they have not been validated nor have the the recommendations for the use of certain instruments been justified. With the new developments in research directed toward the first and second language acquisition of bilinguals and the changes in the theory of communication it is necessary that procedures for assessment be tested and closely scrutinized. The lack of valid instruments for bilingual students also necessitates the validation of assessment procedures.

CHAPTER III

METHOD

Type of Study

This study used an ex post facto approach in the validation of an assessment procedure for determining language disorders in bilingual children. It attempted to incorporate a multidimensional approach to assessment as suggested by ASHA (1983) and Erickson (1983). The study used Expert Reviewers and Diagnostic Groups in the more subjective development and validation process. It also used statistical means of analyzing the data.

Rationale for Design

Kerlinger (1973) states that ex post facto research is used when the subjects cannot be manipulated or assigned because the independent variable(s) have already occurred. In this case, the focus of the study was Spanish/English children who were classified as language disordered, Spanish/English children who appeared to have language difficulties and had received a language evaluation but were not found to be language disordered, and Spanish/English children who were functioning normally academically and linguistically. The use of the three groups allowed for an examination

of how the groups might differ on the assessment data. Expert Reviewers were blind to initial classifications when they made decisions about the language classifications of the three groups of children. Diagnosticians and speech language pathologists became part of the cross-validation process.

Design

Structurally ex post facto research designs resemble experimental designs. The only difference is the lack of manipulation of the dependent variable (Kerlinger, 1973). Considerations of control must be taken into account as in experimental research. In this study a complex sampling technique was used to take into consideration those necessary measures of control. A sampling technique which somewhat resembles a multistage cluster sampling and a stratefied random sampling was used (Borg & Gall, 1979). Three groups of bilingual children with differences in language functioning were identified first. Group A included Spanish/English bilingual children who had been identified as language disordered by the public schools, Group B consisted of Spanish/English bilingual children who had some language difficulty and had been tested but were not found to be language disordered, and Group C included

Spanish/English bilingual children who were functioning normally academically and linguistically in the classroom. All three groups of children had intellectual capacities within the normal range (85-115), came from similar socioeconomic backgrounds, and Spanish was their primary language upon school entry in kindergarten. At the second stage of selection, children from these three groups were randomly selected to ultimately compare three groups of twenty children. The consideration of the primary variables, i.e., IQ, Socioeconomic backgrounds, and language backgrounds, had been carried out because the literature indicated that these three variables affect language. It was therefore necessary to control for these variables in order that the children's performance on the assessment techniques would not be contaminated by these factors. Socioeconomic backgrounds were determined by the area in which the children lived and sometimes the father's occupation. The intelligence abilities were determined by the IQ scores in the student files on the forty children who had received a special education evaluation. These IQ scores normally were based on Wechsler Intelligence Scale for Children-Revised and Leiter measures which had been administered to the children. The 20 children who were part of the group who had never

been tested were administered the Kaufman Assessment Battery for Children by the researcher. Language Backgrounds were determined by the parent report on what language the child spoke first and the Lau Ratings on the child at school. The design looked as follows:

$X_1(r)$	O
$X_2(r)$	O
$X_3(r)$	O

X: Group
r: Random assignment
O: Assessment

Group Compositions

Expert Reviewers. Expert Reviewers were selected on the basis of their expertise in the identification of language disorders in Spanish/English bilingual children. The majority of these individuals who had been identified as Experts had written and published articles and other materials related to the area and were regionally, nationally, and internationally recognized.

Eight Expert Reviewers were contacted by mail and asked whether they would like to participate in the

study (see Appendix A). They were sent an abstract of the study along with a reply form which they were to fill out with their response (see Appendix B). If they chose to participate they were to complete the questionnaire developed by the Bilingual Language Learning System in order to gain an idea of their perspectives on the language assessment of bilingual children (see Appendix C).

Five of the individuals contacted responded that they would like to participate in the study as an Expert Reviewer. One individual said she felt she did not possess the Spanish language proficiency needed to participate but recommended another individual whom she felt would better serve in the study. The person who was recommended agreed to participate when she was contacted. A total of six individuals agreed to participate in the study. One individual did not send the data after repeated calls, therefore, he was dropped from inclusion in the study. A total of five Expert Reviewers remained in the study.

The five individuals who participated as Expert Reviewers were working with Spanish/English bilinguals in different parts of the country. They were geographically well distributed, i.e., California, Texas, New Mexico, Illinois, and Puerto Rico.

The Expert Reviewers' experiences varied, however, all had worked extensively with Hispanic children. Three of the individuals were employed in university settings. One was the director of a speech clinic serving a large Mexican American population, another was the director of a bilingual/special education training program emphasizing language differences and deficits among bilinguals, and the third individual was chairman of a department concentrating on communicative disorders in monocultural/monolingual and bicultural/bilingual individuals.

Two individuals were not employed by universities. One individual worked for a major organization for the handicapped and assessed and diagnosed bilinguals referred to that agency. The other person was a consultant in speech and language assessment of bilingual children in her state's public schools and the State Department of Education.

Diagnostic Groups. The participants in the Diagnostic Groups were employed by the school districts from which the children had been drawn. Only enough individuals to comprise three Diagnostic Groups volunteered to participate in the study. Speech language pathologists and educational diagnosticians composed the Diagnostic

Groups since they are the individuals who are most knowledgeable about making diagnoses and recommendations about classification and placement of language disordered children. Both educational diagnosticians and speech language pathologists are involved in the testing of these children in New Mexico.

Group 1. Seven individuals including two speech language pathologists and five educational diagnosticians agreed to participate in Group 1. On the date scheduled for the review of the data, only five educational diagnosticians actually participated. None of the group participants were bilingual, but one member could read some Spanish.

Group 2. Group 2 consisted of two speech language pathologists and two educational diagnosticians. One of the individuals spoke some Spanish, however, none of the participants were fluent in the language. Three individuals were able to read some of the Spanish.

Group 3. Group 3 included individuals who were part of a bilingual assessment committee in one of the school districts. The group was composed of two speech language pathologists and two educational diagnosticians. All of the individuals in this group

could read and speak Spanish. Two of the participants were native speakers while two were academic bilinguals. The individuals in the group had experience assessing and diagnosing bilingual children in their district.

Data collectors. The data were collected by a number of individuals who had either been trained by the researcher or had received prior training depending on the technical nature of the type of data they were to collect.

Home interviewers. Four home interviewers were trained by the researcher to make home visits and gain information about the child's language in the home (see Appendix D for specific topics about interviewing included in the training). They were trained to use the Home Bilingual Usage Estimate and the Parent Questionnaire. All of interviewers were proficient in English and Spanish and were culturally and linguistically compatible with the parents. They had all lived in the area for a number of years. The home interviewers set up an appointment with the parents at the parents' convenience and asked them questions about their child's language functions in the home. The interviews were either conducted in Spanish or in English depending on the parents' preference. All

interviews were conducted using direct questionnaires, but the interviewers were also trained to probe when needed.

Child examiners. The Child Examiners consisted of trained speech language pathologists, speech language pathology undergraduates who would be graduating at the end of the academic year, speech language pathology graduate students, and the researcher. Their job was to administer and score the standardized tests. The researcher did not engage in obtaining or transcribing any of the speech language samples since she was not trained to do this.

School districts. The children who participated in the study came from two school districts in southern New Mexico. Both districts were relatively large, however, one served a rural environment while the other included an urban (under 100,000) population. Both school districts serve a large proportion of Hispanics. Due to the proximity of the school districts to the Mexican border, many children who attend these school districts have close ties to relatives in Mexico.

Communities. The majority of the participants in the study lived in the Mexican American areas of their

respective communities. The largest group of children came from the Mexican American barrio of the urban community. This area is inhabited almost exclusively by a Mexican American population. Most houses in this area are single family dwellings with small yards. Since the area is an older portion of the city, many houses are constructed of traditional adobe. Families live and exist in a close community environment, however, they are not isolated from the rest of the city.

Student population. A total of 60 Mexican American children between the ages of 7-10 participated in the study. These children had entered school in kindergarten as limited English speakers (LES) or non-English speakers (NES). The children were of average intellectual ability with IQs within plus or minus one standard deviation from the mean (85-115). As indicated in Table 1, the mean intelligence quotient for the total group was 94.5.

Table 2 shows that both parents of 62% of the children had been born in Mexico. Twenty-eight percent had at least one parent who was born in the United States and the other born elsewhere. Ten percent had American-born mothers and fathers. The children with two foreign born parents had a mean residency in the United States of 9.3 years.

Table 1

Population Characteristic Means

Characteristic	Mean
IQ	94.5
Residency in US for 2 Mexican Parent families	9.3 yrs.
Number of children in the family	5.0

Groups included in study. Three different groups of children were included in the study: (1) children who had been classified as language disordered by the public schools; (2) children who were referred for a special education evaluation and a language assessment and did not qualify for placement; and (3) children who were acquiring English as a second language but were progressing normally with their language development and schoolwork. These three groups were used to determine whether differences in languages assessment could be distinguished between the three groups.

Table 2

Percentages and Numbers of Population Variables

Variable	n	%
Females	30	50
Males	30	50
Both Parents born in Mexico	37	62
Both Parents born in US	6	10
One US Parent/One Mexican Parent	17	28
10 Year Olds	13	22
9 Year Olds	10	17
8 Year Olds	21	35
7 Year Olds	16	27

Group A. Group A consisted of 20 children classified as language disordered by the public schools. They did not demonstrate any other exceptionality. These children were in language therapy programs reflecting different special education placement levels, i.e., A, B, or C levels. The A and B level children participated in language therapy programs which did not exceed two

regular school periods. The level C children received a special language program for half of the school day.

Group A was composed of children who had been given different Lau ratings. The Lau ratings were intended to relate to the level of language proficiency in English and Spanish. A Lau C for this group of children often meant that they had equally low language proficiency level in English and Spanish. A Lau A rating indicated that the child was Spanish Monolingual. A Lau B rating implied that the child spoke mostly Spanish but that the child also had limited English-speaking ability. Table 3 includes the breakdown of children with different Lau ratings in Group A. The largest percentage of children in Group A were considered Bilingual by the Lau Ratings.

Table 4 illustrates the composition of the group according to sex and age. Both males and females were represented in the group. The largest age group included in Group A were eight-year olds.

The family characteristics of Group A indicate that the majority of the children had at least one parent who was born in the United States (see Table 5). The smallest percentage of the group had two parents who were born in the United States. For those children with

two parents born in Mexico, the mean length of residency for the group was 15 years.

Families were relatively small with the majority consisting of three children. The mean number of children for the families was 4.

Table 3

Lau Ratings for Group A

Rating	n	%
Lau A	6	30
Lau B	4	20
Lau C	10	50

Table 4

Composition of Group A

Variable	n	%
Males	11	55
Females	9	45
10 Year Olds	4	20
9 Year Olds	5	25
8 Year Olds	8	40
7 Year Olds	3	15

Group B. Group B was composed of children who had been referred for a special education evaluation but did not qualify after the speech and language evaluation and the Educational Appraisal and Review Committee meeting. Table 6 illustrates the Lau ratings for Group B. It should be noted that the largest percentage was considered to be Bilingual.

Table 5

Family Characteristics of Group A

Family Characteristics	n	%
Both Parents Born in Mexico	7	35
Both Parents Born in US	4	20
1 US Parent/1 Mex. Parent	9	45
1 Child in Family	1	5
3 Children in Family	6	30
4 Children in Family	7	35
5 Children in Fam	2	10
7 Children in Family	1	5
9 Children in Family	1	5

Table 6

Lau Ratings for Group B

Ratings	n	%
Lau A	4	20
Lau B	7	35
Lau C	9	45

Group B had 11 males and nine females. There was almost an even distribution of all four age groups as demonstrated by Table 7.

Table 7

Composition of Group B

Variables	n	%
Males	11	55
Females	9	45
10 Year Olds	6	30
9 Year Olds	4	20
8 Year Olds	6	30
7 Year Olds	4	20

The majority of the families of the children in Group B had two parents who were born in Mexico. Only one child in this group had two parents born in the United States. Of the group of children whose parents were both born in Mexico, the mean number of years of residency for the family was six years. The group mean of children per family was 4.0 (see Table 8).

Table 8

Family Characteristics for Group B

Family Characteristics	n	%
Both Parents Born in Mexico	16	80
Both Parents Born in U.S.	1	5
1 Parent Born in US/1 in Mex.	3	15
1-3 Children in Family	7	38
4-5 Children in Family	9	48
7-9 Children in Family	2	14

Group C. Group C consisted of children who were functioning normally linguistically and academically in the regular classroom. These children were receiving English as a second language instruction for approximately 20 minutes a day. The Lau ratings for Group C are illustrated in Table 9. These ratings demonstrate that the majority of the children were Spanish Monolingual.

Table 9

Lau Ratings for Group C

Rating	n	%
Lau A	12	60
Lau B	4	20
Lau C	3	15
No Lau rating	1	5

In Group C there were eight males and 12 females. Seven and eight year olds were represented in larger numbers in this group (see Table 10).

The majority of the children in Group C had two Mexican-born parents. Only one child out of the group had two American-born parents (see Table 11). The mean length of residency for those parents born in Mexico was six years. The mean number of children for the group was six.

Table 10

Composition of Group C

Variables	n	%
Males	8	40
Females	12	60
10 Year Olds	3	15
9 Year Olds	1	5
8 Year Olds	7	35
7 Year Olds	9	45

Table 11

Family Characteristics for Group C

Family Characteristics	n	%
Both Parents Born in Mexico	15	75
Both Parents Born in US	1	5
1 Parent Born in US/1 Parent Born in Mex.	4	20
2-3 Children in Family	5	26
4-5 Children in Family	4	22
6-8 Children in Family	6	30
10-16 Children in Family	4	22

Comparisons between Groups A, B, and C. There was little difference in the male/female composition of Groups A, B, and C. The age levels were also fairly evenly distributed among the three groups. The mean age did not differ greatly, nor did the mean IQs.

Groups A and B had the largest representation of Lau C or Bilingual children. Group C had the largest percentage of Spanish Monolingual or Lau A children. This implies that according to the schools' Lau Ratings, Group C had some language dominance differences and a large percentage of Spanish Monolingual children in comparison to Groups A and B. Groups B and C were made up of a large percentage of children whose mother and father had been born in Mexico. Group A exhibited the largest percentage of children who had one American-born and one Mexican-born parent. Generally, all three groups had a low percentage of children with two American-born parents.

Groups B and C had a mean length of residency for Mexican born parents of approximately six years. Group A's Mexican-born parents had a mean length of residency of 15 years.

The mean number of children for families ranged between four to six children. In Group C there were some families that had more than six children.

The demographic data as well as other data indicates that generally the groups were similar in the characteristics needed for some common grounds for comparison, i.e., family characteristics such as family size, and parents' birthplace, and the distribution of age levels per group. The mean IQs are somewhat higher for Group C but this may be due to the use of the Kaufman Assessment Battery for Children which is considered to be a less biased instrument and resulted in higher IQ scores for this group (see Table 12).

Measurement Techniques

The assessment process incorporated a multidimensional approach to testing. It included standardized instruments, informal checklists and questionnaires, and examples of the child's spontaneous language. The standardized tests were used to assess language dominance and receptive and expressive language abilities. Use of the child's language in school and in the home was evaluated through more informal means (see Table 13). The assessment of the child's ability to use and understand language in both Spanish and English was important in determining language disorders in bilingual children and therefore formal testing was conducted in both languages. It was also necessary to assess

Table 12

Group Mean and Standard Deviation

Comparisons on Variables

	Age	IQ	# Yrs. in USA	# Children
Group A				
Mean	8.5	93.2	15	3.8
SD	1.0	7.8	4.1	1.7
Group B				
Mean	8.6	91.5	6.8	3.8
SD	1.1	6.4	7.0	1.6
Group C				
Mean	7.9	99.0	6.0	6.3
SD	1.0	9.0	7.6	3.6

different language ability areas, i.e., knowledge of vocabulary, concepts, ability to understand oral directions, grammar, and other language parts in order to more accurately determine language deficiencies (Langdon, 1983). The procedure employed in the study took all this into account.

Language Dominance

The language of the home was assessed by questioning the parents about language used in the home. Essentially language dominance measured by the Home Bilingual Usage Estimate examined who spoke what language to whom. The measure inquired about language use with those individuals in an extended family, i.e., grandparents, uncles, aunts, cousins, as well as parents and siblings. Actual Spanish and English language performance was assessed by the Spanish/English Language Performance Screening. This was done in order to more effectively measure the child's language dominance in both languages. Because tests do not measure levels of bilingualism very well, it was anticipated that by using home information and the child's performance level a more accurate performance level could be obtained.

Table 13

Areas Assessed and Measures Used

Language Area	English Test	Spanish Test
Vocabulary	Toronto Test of Receptive Vocabulary (TTRV)	TTRV
Concepts	Boehm Test of Basic Concepts	Boehm
Comprehension	Language Sample	Lang. Sample & Prueba de Expresión Oral y Percepción La Lengua Española (PEOPLE)
Oral Directions	Boehm	Boehm
Morphology	Bilingual Syntax Measure (BSM)	BSM
Sentence Repetition		PEOPLE
Expression of Specific Items		PEOPLE
Expression of Sentences and General Information	Spanish/English Performance Screening (S/ELPS)	S/ELPS
Language Dominance	Home Bilingual Usage Estimate (HBUE) & S/ELPS	S/ELPS
Pragmatic Use of Language	Teacher Checklist & Parent Questionnaire	Parent Questionnaire
Spontaneous Language	English Language Sample	Spanish Sample

Instruments Used

Boehm Test of Basic Concepts. The Boehm is a screening test for the mastery of basic concepts. It was devised to assess children in kindergarten through the second grade in both English and Spanish. The reliability coefficients are reported to be between the .80 to .89 range. The validity coefficient was .79 (Watson, Grouell, Heller, & Omark, 1981). The concepts the children knew and did not know were compiled on a summary sheet for the purposes of this study (see Appendix E).

Bilingual Syntax Measure. The BSM assesses the child's English and/or Spanish grammatical structures by making judgments about the child's natural speech. The score on the English test will result in classifications of No English, Receptive English, Survival English, Intermediate English, and Proficient English. These levels for Spanish are No Spanish, Receptive Spanish, Survival Spanish, Intermediate Spanish, and Proficient Spanish.

The BSM has been considered the most researched language proficiency instrument in the field (Omark, 1983). The norming group consisted of 1,572 children in grades K-2 of varying ethnicity, the largest of which

was Mexican American (n=749). Construct and content validities are rated as fair (Silverman, et al., 1978). Levels I and II were used depending on the age of the children. Level I was for children up to nine while Level II was used for ten year olds.

Home Bilingual Usage Estimate. The HBUE is administered in interview form to the parents to measure language usage in the home. The score that is derived is used to place the child in one of five categories: (1) English monolingual; (2) English dominant; (3) apparent monlingual; (4) Spanish dominant; or (5) Spanish monolingual. It can be administered to children in the elementary school grades. The concurrent validity coefficient is .95. The test/retest reliability coefficient is .97. The measurement validity of the instrument is considered to be fair (Silverman, et al., 1978).

Kaufman Assessment Battery for Children. The K-ABC is an individually administered measure of intelligence and achievement that was developed in 1983. It has incorporated educational, psychological, and neuropsychological research in its development. This instrument has also grown out of a need for a less biased intelligence test for minority children. The test is appropriate for children between the ages of two

and a half through 12 1/2. The researcher has specifically chosen this instrument since it appears to include many innovations in the field of testing which other tests fail to consider. The test has attempted to separate achievement-type questions in the intelligence section of the test. This test has been proposed to be less biased toward minority children. The researcher's own experience with this test supports the less biased nature of the test since minority children who have been tested with it performed better on the instrument than on the WISC-R.

The norming sample included 2,000 children from 34 test sites in 24 states. The sample was stratified within each age group according to sex, geographic region, socioeconomic status, race or ethnic group, community size, and regular or special education placements. Hispanic children were proportionately represented in the norming sample. The Hispanic children were also drawn from parents of different educational levels and from different geographic regions.

Construct validity coefficients on the Mental Composite scores ranged between .49 to .63 including all the subtests across age levels. Internal consistency coefficients for the achievement scale ranged from .69

to .89 with a median of .82. The test-retest reliability for children between the ages of five to 12-5 ranged from .82 to .97 on all the subtests.

Pruebas de Expresión Oral y Percepción de la Lengua Española (PEOPLE). The PEOPLE was developed especially to assess language disorders in non-English speaking or limited English-speaking Mexican American children. The test is administered in Spanish and must be administered by a bilingual examiner. It contains five subtests that assess auditory sequential memory, auditory association, encoding, story comprehension, and sentence repetition. The assessment of these areas and their relationship to language disorders is well documented by the test developer and is based on sound language development research. The American Speech and Hearing Association recommends this test for the assessment of language disorders in Spanish-speaking children between the ages of 6 and 10 (ASHA, 1983).

The test was normed on 674 Mexican American public school children from school districts in California. Two hundred seventy six of those chidlren were classified as non-English speakers and 398 were classified as limited English speakers. The reliability coefficients on the different subtests ranged from .70 to .93.

The Spanish/English Language Performance Screening (S/ELPS). The Pictorial Test of Bilingualism and Language Dominance was proposed to be used in the study because of its good technical qualities. At the time tests were ordered, however, the PTBLD was out of print. The search for a new language dominance instrument with technical qualities that were equal or surpassed that of the PTBLD led to the use of the S/ELPS.

The S/ELPS was published in 1976. It was designed to assess the language dominance skills in Spanish and English of Mexican American children in kindergarten through third grade. The authors include the following categories in its assessment (SEDL, 1976):

> Category 1 - Spanish. The child speaks only Spanish and little or no English.
>
> Category 2 - Predominantly Spanish. The child speaks Spanish as the stronger or dominant language but can also communicate to a limited extent in English.
>
> Category 3 - Bilingual. The child speaks both English and Spanish; the child may speak the two languages separately or may blend both languages.
>
> Category 4 - Predominantly English. The child speaks English as the stronger or dominant language, but can also communicate to a limited extent in Spanish.
>
> Category 5 - English. The child speaks only English and little or no Spanish.

> Category 0 - Undetermined. The S/ELPS does not yield a sufficient sample of the child's language on which to base a determination of which language is stronger. (p. 11)

Test-retest reliability is reported at r=1.0 for the Spanish section and r=.86 for the English part. The test developers put the instrument through an extensive process to validate their item selection. The questions in English and Spanish underwent a four-stage process to determine face validity while taking into account cultural aspects.

Toronto Tests of Receptive Vocabulary. The TTRV can be used with English and Spanish-speaking children to determine proficiencies in receptive vocabulary. It is appropriate for children between the ages of four and 10. The norming sample consisted of 464 Anglo American children, 432 English-speaking Mexican Americans, and 380 Spanish-speaking Mexican American children. The norming group was all drawn from Central Texas. ASHA (1983) lists that the advantages of the test are that: (1) it yields better information than translated vocabulary tests such as the Peabody Picture Vocabulary Test; (2) it is quick to administer (10-20-minutes); (3) It allows for change in the vocabulary for the picture; (4) the test includes practice items so that the task can be taught before beginning to test; (5) items can be

repeated; and (6) a cutoff score is provided which indicates that intervention is required. Some of the disadvantages that are listed are: (1) that by itself the test does not provide a great deal of diagnostic information; (2) the picture drawings are not as good as they could be; (3) the test only includes 40 items; and (4) the instructions need to be given verbatim.

Parent Questionnaire of Language Functions. The questionnaire was adapted from one suggested by Omark (1981). Questions were reworded to make them less complex for the parents and an additional part was added that assesses the frequency with which the language functions occur and the language that is used for each. The questionnaire was translated into Spanish so that the parents would have the option of having it administered in the language they felt most comfortable with (see Appendix F and G). Omark (1981) stresses the importance of the use of this type of questionnaire because it allowed for the examination of language in the home environment.

Teacher Observation Checklist. The checklist (see Appendix H) was adapted from one developed by Omark (1981). This checklist allowed for the evaluation of the child's language functioning of communicative

situations in the classroom as perceived by the teacher. The teacher was asked to check only those items that applied to the child's use of language in the classroom (see Appendix I).

Language Samples. Language samples in English and Spanish were taken on all children by speech language pathologists. These samples assessed the child's language in a more natural situation. The speech language pathologist attempted, to initiate language which has not been clearly measured by other instruments, by using Shirley Brice Heath's notions that not all cultures respond to spontaneous language situations in the same (Brice Heath, 1984). In her work with Mexican American children she found that responding to a narrative or talking about a picture (typical techniques used to obtain a language sample) may not get much response from these children. Talking about social events and friends are considered more appropriate methods to use with Mexican American children.

In this study the speech language pathologist asked the child to talk about a pleasant event with a friend or family member. The child was asked to talk about the event first then was told to repeat the story in English and Spanish. Probes were used by the examiner as

needed. The samples were recorded on a tape recorder and transcribed at a later time.

Prutting (1983) states that the use of a language sample to determine language proficiency is especially important in the assessment of the bilingual child. This type of evaluation allows for the examination of conversation as it would normally occur among two people. ASHA (1983) suggests that English and Spanish language samples are important parts of the language evaluation of bilingual children especially since many of the language tests developed for these children are technically poor and limited in their scope of language use.

Data Analysis

The children's test scores were converted to standard scores whenever possible in order for better comparison's to be made across tests. This information appeared on a matrix (see Appendix J) so that the Expert Reviewers and the Diagnostic Groups could see as much of the information as possible at a glance. A summary sheet of the student's raw scores, percentiles and standard scores on each of the measures was also enclosed (see Appendix K). Protocols and the other information were submitted to the Expert Reviewers and

to all the Diagnostic Groups. A cover sheet including some demographic data on each child was submitted (see Appendix L). The Expert Reviewers and the Diagnostic Groups made decisions on each child by checking the category they felt the child belonged in on the basis of the assessment data. These included categories of: (1) Language-Disordered; (2) Borderline/at risk; (3) Not Language Disordered - No apparent language problem; and (4) Not Language-Disordered - Language difficulties associated with second language acquisition process (see Appendix M). The Expert Reviewers also made recommendations about the data that they found to be most useful in helping them make their decisions (see Appendix N).

A comparison was made between the Expert Reviewers' classifications of each child, between the Diagnostic Groups' classifications and among the Expert Reviewers and Diagnostic Groups. A consistency of agreement was determined for each comparison by using the following formula:

$$\frac{\text{Number of Agreements}}{\text{Number of Agreement + Disagreements}} = \text{Coefficient of Agreement}$$

This formula is suggested by Borg & Gall (1979) to

determine interobserver reliability in cases in which a number of individuals will make judgments about sets of data.

One-way analyses of variance were performed on the data with each of the three group categories as levels of the independent variable and each of the measures as the dependent variable. The dependent variables included the Boehm in English and Spanish, Bilingual Syntax Measure in English and Spanish, Toronto Test of Receptive Vocabulary in English and Spanish, the subtests of the PEOPLE, the Teacher Checklist, and the Parent Questionnaire.

A stepwise regression analysis was also performed on the data to determine the predictive value of the assessment procedure in predicting classroom language. The stepwise regression is useful when you want to investigate which of many independent variables should be included in the regression model. The stepwise regression analysis utilized the forward selection and backward elimination process in choosing the variables for the model it considers (SAS, 1982).

A discriminant analysis was also performed on the assessment data of all 60 children included in the study. This analysis was performed in an attempt to statistically compare the classifications made by this

procedure with those made by the Expert Reviewers and the Diagnostic Groups. Discriminant analysis is described in this manner by Sanathanan (1975):

> Discriminant analysis is a technique that is used to classify a bone as human or not on the basis of several measurements, classifying a patient into one of several diagnostic categories on the basis of laboratory tests, classifying a job applicant into one of several occupational groups on the basis of aptitude tests, or classifying a person as a good or poor credit risk on the basis of age, income, length of time at present address, etc. (p. 236).

She continues to explain that in cases in which there are many variables to consider, discriminant analysis is a very appropriate statistical procedure because it considers the weighted combination of several variables. The researcher would not be able to classify efficiently by looking at each individual variable since many of them might overlap.

In this study it was felt that there was an overlap in the variables that would be examined since they were all language tests, therefore, a discriminant analysis was used. The three categories used for analysis classifications were language disordered, did not qualify, and not language disordered. The variables that the analysis examined were the assessment measures.

CHAPTER IV

RESULTS AND DISCUSSION

This chapter will address each one of the research questions. It includes: (1) the examination of the differences on the assessment profiles of the three groups of children on different types of data; (2) the consistency of agreement between the Diagnostic Groups and the Expert Reviewers; (3) the results of the discriminant analysis; (4) the results of the regression analysis; (5) the findings on the Analysis of Variance; (6) the examination of what types of information was most useful in the identification process; and (7) the determination of whether the assessment procedure was valid and reliable.

Research Question 1: What are the differences in the assessment profiles of those children with language disorders, those with language difficulties because of a language difference, and those who appear to not have any problem with language?

In response to this question several data were examined: (1) raw scores or those items that were tallied such as those on the Teacher Checklist, Parent Questionnaire, and the Bilingual Syntax Measure in English and Spanish; (2) standard scores which included

all other measures except the language samples; (3) language dominance profiles on the basis of the different measures; and (4) the linguistic milestones as reported by the parents. The three groups were compared according to these data.

Raw Score Data Profiles

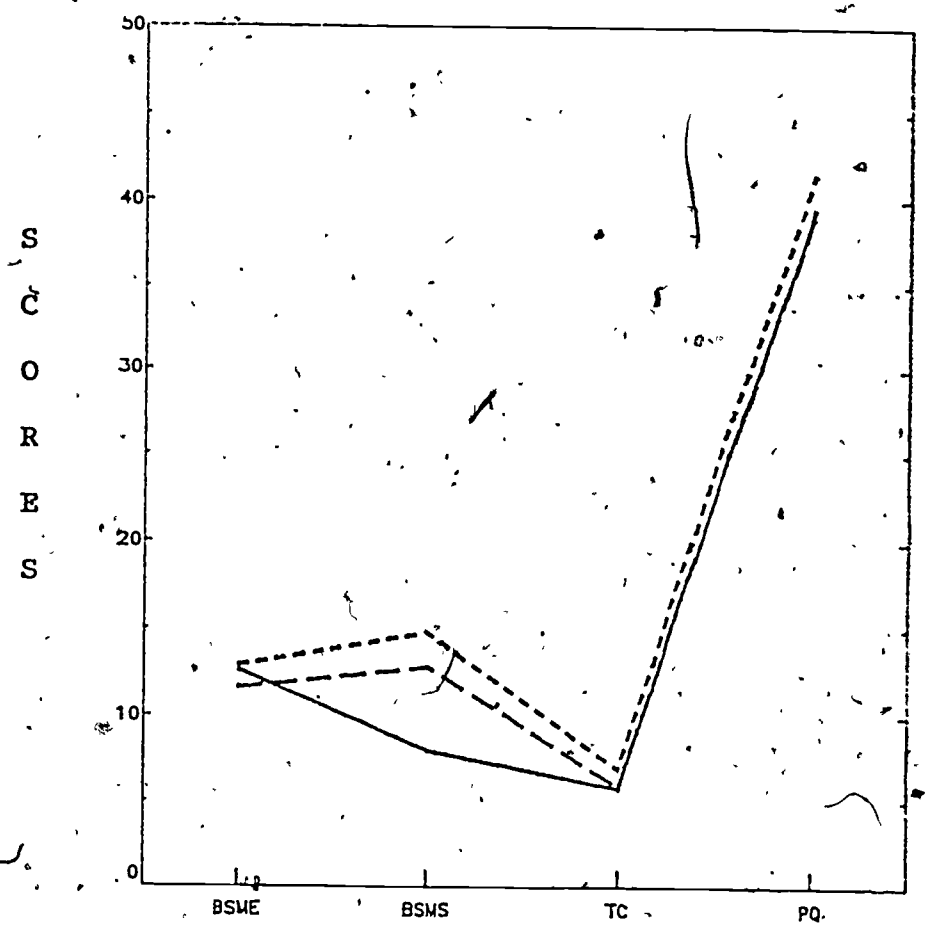
The most visible differences appeared to exist between the three groups in their performance on the Bilingual Syntax Measure in Spanish (BSMS). On this test Group A's mean score was 5.7, Group B received a score of 5.8, and Group C a 14.8. On the Bilingual Syntax Measure in English all three groups were clustered between 11.65 and 12.95. On the Teacher Checklist Group A received a mean of 5.7, Group B a 5.8, and Group C a 6.9. The means for language functions of the groups on the parent questionnaire reflected a mean of 39.55 for Group A, 39.25 for Group B, and 41.50 for Group C (see Figure 1).

Standard Score Profiles

The means for Groups, A, B, and C were also compared on the assessment instruments whose scores could be converted to standard scores with a mean of 100 and a standard deviation of 15. Taking into account that the standard score conversions needed to be viewed

Figure 1

Raw Score Data Profile



with some caution due to possible differences in norming groups, a basis for common comparison needed to be established.

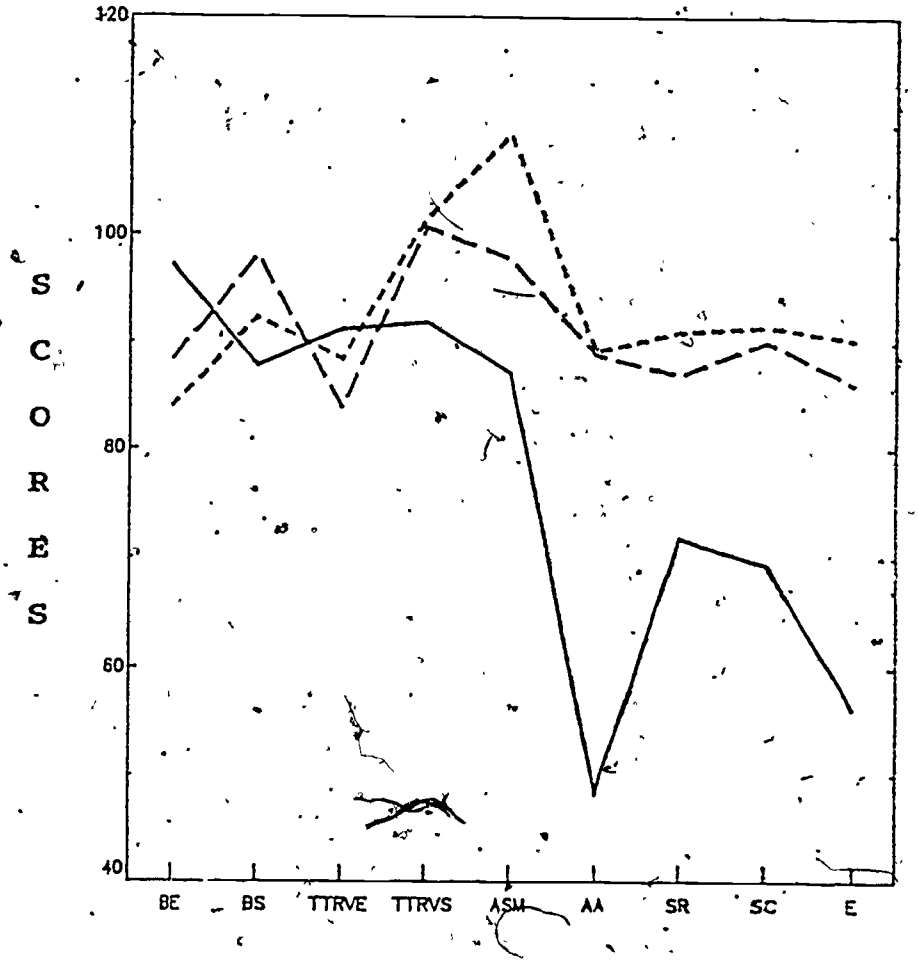
The performance by the Groups on the Toronto Test of Receptive Vocabulary in Spanish (TTRVS), the Auditory Sequential Memory (ASM), Sentence Repetition (SR), and Encoding (E) subtests of the PEOPLE Test show means in which Group C scored the highest, Group B was in the middle range, and Group A demonstrated the lowest means. On the TTRV in Spanish the mean score for Group A was 92, that for Group B was 101, and that of Group C was 102. The Auditory Sequential Memory subtest scores resulted in group means of 87, 98, and 109 for Groups A, B, and C, respectively. Sentence Repetition subtest scores demonstrated means of 72 for Group A, 87 for Group B and 91 for Group C. On Encoding the mean for Group A was 56, that for Group B was 86 and for Group C the mean was 90 (see Figure 2).

Language Dominance Profiles

An important comparison between the three groups is that concerning language dominance, especially since language dominance could affect the other language proficiency measures. For this comparison the results of the Home Bilingual Usage Estimate (HBUE), Spanish/

Figure 2

Standard Score Profiles



English Language Performance Screening (S/ELPS), and the Lau Ratings were analyzed.

All three ratings are intended to provide a similar indication of language dominance. However, the measures did not effectively do this. The HBUE best describes the language dominance of the home. While it does indicate what language the child is involved in most in the home, expressive and receptive abilities cannot be judged. At best it describes language involvement by the child which can be used as a springboard for further assessment of expressive and receptive language abilities in both languages.

The S/ELPS did assess the child's expressive and receptive abilities in both English and Spanish. A portion of the test, however, was academic and children tended to answer this portion of the test in limited Spanish on the Spanish section and elaborated English on the English portion. This pattern changed what would have been a Bilingual rating to Predominant English.

Forty-seven percent of the subjects had Lau Ratings that were determined without language testing. The Lau rating was most often based on parent reporting of language use at home or on teacher observations. Often these ratings had been determined at the time the child had entered school and had never been changed even

though the language dominance of the child had changed considerably. In the majority of the cases for all three groups there was more agreement between the Lau Ratings and the HBUE than the S/ELPS and the other ratings.

Language dominance ratings of Group A. Group A consisted of 20 Spanish/English bilingual children who had been classified as language disordered in the public schools. They were in A, B, or C level special education language programs.

In Group A, only one of the 20 subjects had language dominance data thatdemonstrated consistent information about the child's dominance across the three measures. Five of the children had ratings that were consistent on the HBUE and the S/ELPS. Seven ratings on the HBUE and Lau classification were in agreement (see Table 14).

If the data are analyzed separately for each rating measure for Group A, the results of the HBUE would indicate that 50% of the children were Spanish Dominant or Spanish Monolingual, 40% of the children would be considered English dominant, and 10% would be considered Apparent Bilinguals. On the S/ELPS, the highest percentage of Group A would be considered Predominant

Table 14

Consistency Across Language Dominance Ratings

on Different Measures

for Group A

Child #	HBUE	S/ELPS	LAU Rating
1	Spanish Dominant *	Predominant English	B
2	Spanish Dominant *	Predominant English	B
5	Spanish Dominant	Predominant Spanish	A
6	English Dominant	Predominant English **	C
7	English Dominant	English Monolingual	C
8	Spanish Dominant *	Bilingual	B
20	English Dominant	Predominant English **	C
21	Spansih Dominant	Predominant English	C
22	English Dominant	Predominant English **	C
23	Apparent Bilingual *	Predominant English	C
24	Spanish Dominant	Predominant English	C
25	English Dominant	Bilingaul	A
26	English Dominant	Predominant English **	C
27	Spanish Dominant	Bilingual	A
28	Spanish Dominant	Predominant English	A
29	English Dominant	English Monolingual	C
30	English Dominant	English Monolingual	C
31	Spanish Monolingual *	Predominant English	A
52	Apparent Bilingual *	Bilingual **	C ***
55	Spanish Dominant *	Bilingual	A

* - HBUE & Lau Ratings ** - HBUE & S/ELPS *** - All three ratings

Table 15

Percentage of Ratings

on Different Measures

for Group A

HBUE	S/ELPS	LAU
Spanish Dominant - 50% Spanish Monolingual	Predominant Spanish - 5%	Spanish Only - 30%
English Dominant - 40%	Predominant English - 70%	Spanish Dominant - 20%
Apparent Bilingual - 10%	Bilingual - 25%	Bilingual - 50%
		English Dominant - 0%

DOCUMENT RESUME

ED 260 859 RC 015 389

AUTHOR Cole, Jack T.; De Leon, Josie
TITLE An Investigation into the Development and Validation of an Assessment Procedure for Identifying Language Disorders in Spanish/English Bilingual Children.
INSTITUTION New Mexico State Univ., Las Cruces. Coll. of Education.
SPONS AGENCY Special Education Programs (ED/OSERS), Washington, DC.
PUB DATE Jul 85
GRANT G008430022
NOTE 217p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC09 Plus Postage.
DESCRIPTORS *Bilingual Students; Children; Communication Disorders; Comparative Analysis; Educational Diagnosis; Elementary Education; English (Second Language); Language Dominance; *Language Handicaps; Questionnaires; *Spanish Speaking; *Testing; *Test Validity
IDENTIFIERS New Mexico (South)

ABSTRACT

Sixty bilingual Mexican American children (20 language disorderd, 20 not qualifying for placement, 20 comparison) between the ages of 7-10 from 2 school districts in southern New Mexico participated in the study to develop and validate an assessment procedure to determine language disorders in Spanish/English bilingual children. An ex post facto approach was used in the validation of the assessment procedure which included subject testing, parent interviews, and teacher checklists. Five experts reviewed the assessment data. The investigation did not produce any recommendations on evaluation measures that appeared to be more viable than others in discriminating differences in the language disordered and non-language disordered bilingual child. The findings demonstrated the complexity of attempting to develop and validate a procedure and the obvious need to establish some validity in the diagnosis of language disorders in Spanish/English bilingual children. The study concluded that it will take much research to ultimately determine what diagnosticians should include in the evaluation. Fourteen appendices include correspondence and forms used in the study. (NEC)

English. The analysis of Lau Ratings indicated that the highest percentage of the group were Bilingual (see Table 15).

In Group A, it appears that the largest percentage of the children come from homes in which Spanish is spoken predominantly. In some homes English and Spanish are spoken, however, English is spoken with greater frequency. On a language performance measure, the majority of children appeared to be more proficient in English.

Language dominance ratings of Group B. Group B was composed of 20 Spanish/English bilingual children who had been referred for a special education and language assessment but had not qualified for placement.

In Group B, three of the subjects had language dominance data that were consistent across the HBUE, S/ELPS, and the Lau Ratings. Two of the 20 subjects also had HBUE and S/ELPS ratings that were consistent. Eight ratings were consistent on the HBUE and Lau Ratings (see Table 16).

The results of the HBUE and the Lau Ratings indicated that the highest percentage of the group is Spanish Monolingual or Spanish Dominant. The S/ELPS does not concur with HBUE and Lau Ratings. In the

S/ELPS the highest percentages of children are Predominantly English or English Monolingual and Bilingual. The data indicate that the majority of the children come from homes in which Spanish is spoken predominantly. In a smaller percentage of homes Spanish and English is spoken with approximately the same frequency. A large percentage of the children spoke both English and Spanish on a language performance measure assessing dominance (see Table 17).

Language dominance ratings of Group C. Group C consisted of 20 Spanish/English bilingual children who were progressing normally in school and whose language appeared to be normal. They were acquiring English as a second language.

In Group C one of the subjects had a language dominance rating that was consistent on the HBUE, S/ELPS, and the Lau Ratings. Four of the subjects' ratings were consistent on the HBUE and there was agreement for six of the subjects on the HBUE and Lau rating (see Table 18). As is demonstrated in Table 19, the highest percentage of children in Group C are Spanish dominant or Spanish monolingual across all three measures. The lowest percentage reflected on the HBUE is English Dominant. On the S/ELPS and the Lau

Table 16

Consistency Across Language Dominance Ratings

on Different Measures

for Group B

Child #	HBUE	S/ELPS	LAU
3	Spanish Monolingual *	Bilingual	A
4	Spanish Dominant *	Predominant Spanish **	- B ***
9	Spanish Monolingual *	Predominant Spanish	A ***
10	Apparent Bilingual *	Predominant English	C
11	Spanish Monolingual	Bilingual	B
12	Spanish Dominant	Predominant English	C
13	Spanish Dominant	Bilingual	C
14	Spanish Dominant	Bilingual	C
15	Spanish Dominant	Bilingual	A
18	Spanish Dominant	Bilingual	C
19	Spanish Dominant	Bilingual	C
35	Spanish Monolingual	English	C
36	Spanish Monolingual	Predominant Spanish	B
37	Spanish Dominant	Bilingual	C
38	Spanish Dominant *	Predominant Spanish **	B ***
39	Spanish Monolingual *	English	A
49	Apparent Bilingual *	English	C
54	Apparent Bilingual	English	B
59	Spanish Dominant *	English	B
60	Spanish Monolingual	Bilingual	B

* - HBUE ** - HBUE & S/ELPS *** - All three ratings

88

Table 17

Percentages of Ratings

on Different Measures

for Group B

HBUE	S/ELPS	LAU
Spanish Dominant Spanish Monolingual - 85%	Predominant Spanish - 20% Spanish Monolingual	Spanish Only - 55% Spanish Dominant
English Dominant - 0%	Predominant English - 40% English Monolingiual	English Dominant - 0%
Apparent Bilingual - 15%	Bilingual - 40%	Bilingual - 45%

Ratings, the lowest distribution appears to be in the Bilingual Category. On the basis of the language dominance ratings what can be said about Group C is that the majority of them come from homes in which Spanish was spoken predominantly. In some homes Spanish and English were spoken with approximate frequency. A large percentage of the children in Group C appeared to feel quite comfortable in expressing themselves in English while some seemed to feel comfortable using both English and Spanish. A small percentage performed predominantly in Spanish on an academic task assessing language dominance.

Comparisons of Groups A, B, and C. In the comparison of the three groups, some general inferences that can be drawn are that the majority of the children in all three groups came from homes in which Spanish is the predominant language. In the three groups the highest percentage of ratings on the S/ELPS reflected a more English Dominant/English Monolingual proportion of speakers than Spanish Dominant/Spanish Monolingual or Bilingual. This is not surprising since the portion of the test in which the children could use elaborative speech was school-related. The children were required to describe what is common to a school situation, thus children may feel

Table 18

Consistency Across Language Dominance Ratings

on Different Measures

for Group C

Child #	HBUE	S/ELPS	LAU
16	Spanish Dominant *	Predominant English	B
17	Spanish Dominant *	Predominant English	B
32	Spanish Dominant	Bilingual	A
33	Apparent Bilingual	Bilingual **	A
34	Spanish Dominant *	Predominant English	B
40	Apparent Bilingual	Predominant English	-
41	Apparent Bilingual	Bilingual **	B
42	Spanish Dominant	Prodominant English	A
43	Spanish Dominant	Bilingual	A
44	Spanish Dominant	Spanish Monolingual **	A ***
45	Spanish Dominant	Predominant Spanish **	A
46	Apparent Bilingual	English Monolingual	B
47	Spanish Monolingual *	Predominant Spanish	A
48	Spanish Dominant	Predominant English	A
50	Spanish Dominant *	English Monolingual	B
51	Spanish Dominant	Bilingual	C
53	Spanish Dominant	Spanish Monolingual	A
56	Spanish Dominant *	Predominant Spanish	A
57	Spanish Dominant	Predominant English	A
58	Spanish Dominant	Bilingual	A

* - HBUE & Lau Rating ** - HBUE & S/ELPS *** - All three ratings

Table 19

Percentages of Ratings

on Different Measures

for Group C

HBUE	S/ELPS	LAU
Spanish Dominant & Spanish Monolingual - 80%	Predominant Spanish & Spanish Monolingual - 25%	Spanish Only - 60%
		Spanish Dominant - 30%
English Dominant - 0%	Predominant English & English Monolingual - 45%	
Apparent Bilingual - 20%	Bilingual - 30%	Bilingual - 5%
		No Rating - 5%

more comfortable using their school language. Generally, the smallest proportions of ratings across the three measures related to the number of bilinguals in the groups. The types of measurement used for the ratings were likely the reason for this. In most homes one language is spoken more frequently than the other, therefore it would be difficult to obtain a rating of Bilingual from the Lau procedure or the HBUE. Since balanced bilinguals are rare (Beatens Beardsmore, 1982), most children would not receive a Bilingual rating on the S/ELPS. Also most of the children had been attending school for two-three years in which learning English was a focus in their curriculum at one point or another. Research on bilingualism indicates that native language loss occurs and the second language can begin to supercede the primary language (Valdés, 1982). Such may have been the case in the discrepancies indicated by the S/ELPS and those of the HBUE and Lau Ratings.

The difficulty in obtaining an adequate assessment of language dominance is borne out by this study. Three indicators of language dominance were used to obtain a clearer picture of the child as well as group language dominance distinctions. Rather than providing insight, the use of the three indicators led to greater confusion. Other than the gross generalizations made

here about group differences, there appears to be little insight into the language dominance across groups or on an individual basis.,

Language Milestones as Reported by Parents

Several questions about the children's language were asked on the parent questionnaire. Questions about the age at which the children spoke their first words, the age at which they spoke in sentences, and the first words that were spoken were among the questions. In asking these questions, the researcher was attempting to examine whether there were differences in the language development of the children in the three areas examined, i.e., age at which the first words were spoken, age at which sentences were spoken, and the first words that were said.

Group A's first spoken words were in Spanish and the first words spoken were usually mama and papa. The mean age at which speech was initiated was one year and five months. The mean age for speaking in sentences was two years and six months. Table 20 includes the age of the first words, the words spoken, and the age at which the first sentences were spoken for each child in the Group.

The data obtained through the Parent Questionnaire indicates that the mean age at which the children in Group B began speaking their first words was two years and three months. The average age at which the group spoke in sentences was two years and six months. As illustrated on Table 21, both English and Spanish words were spoken by this group of children.

The mean age at which the children in Group C started speaking words was 10 months. Sentences were spoken at a mean age of two years. The majority of the children spoke Spanish words first, however, there were some that spoke English and Spanish according to parent reports (see Table 22).

These data indicates that there were some differences in which the milestones that were examined were achieved (see Table 23). Group C spoke words and sentences earlier than the other two groups. Group B appeared to be even more delayed in their speech than Group A according to this data. It is not known why this occurred. It can be assumed either that the data are correct and the children did indeed begin speaking at a later age then Group A who was supposed to have been the disordered Group or that Group A's and C's parents were more accurate in their recall of the actual ages than Group B.

Table 20

Language Characteristics of Group A

Child #	Age Spoke in Words	Words Spoken	Age Spoke in Sentences
1	3 yrs.	mamá, papá	3 yrs. 6 mos.
2	2 yrs. 6 mos.	mira, mami	5 yrs.
5	1 yr. 3 mos.	mamá	3 yrs.
6	1 yr.	mamá, agua, teta	2 yrs.
7	1 yr.	mamá	4 yrs.
8	5 yrs.	mamá	2 yrs.
20	1 yr.	tata	2 yrs.
21	2 yrs.	mamá, papá, water, bottle	2 yrs. 6 mos.
22	1 yr.	mamá, papá, no	2 yrs.
23	9 mos.	mamá, papá	1 yr.
24	1 yr.	papá, teta, agua, mamá	1 yr. 6 mos.
25	1 yr.	tata	2 yrs.
26	9 mos.	mamá	2 yrs.
27	1 yr.	mamá, papá	1 yr. 6 mos.
28	1 yr. 5 mos.	mamá, agua	3 yrs.
29	2 yrs.	agua	4 yrs.
30	1 yr.	mamá	3 yrs.
31	1 yr.	mamá, papá, agua, dame	1 yr. 6 mos.
52	6 mos.	papá, mamá, bottle	1 yr.
55	1 yr.	mamá, papá	4 yrs. 6 mos.

Table 21

Language Characteristics of Group B

Child #	Age Spoke in Words	Words Spoken	Age Spoke in Sentences
3	1 yr. 9 mos.	bottle, mama, papa, milk	2 yrs. 6 mos.
4	3 yrs.	mamá, papá	5 yrs.
9	1 yr. 6 mos.	mamá, papá	2 yrs.
10	1 yr.	papá, mamá	2 yrs.
11	1 yr.	papá, mamá, agua	1 yr. 6 mos.
12	1 yr. 2 mos.	---	2 yrs.
13	2 yrs.	water, bottle, mama, papa	2 yrs. 6 mos.
14	9 mos.	mamá, papá	1 yr. 6 mos.
15	1 yr. 6 mos.	papá	1 yr. 6 mos.
18	1 yr. 6 mos.	mamá, bottle, daddy	3 yrs.
19	1 yr.	papá	1 yr. 6 mos.
35	1 yr. 5 mos.	mamá, papá	2 yrs.
36	1 yr. 6 mos.	papá, mamá	2 yrs.
37	6 mos.	mamá, papá	1 yr. 6 mos.
38	10 mos.	mamá, papá	1 yr.
39	1 yr. 2 mos.	papá, mamá, agua	2 yrs.
49	8 mos.	pan	1 yr. 6 mos.
54	1 yr. 1 mo.	mamá, papá	2 yrs. 3 mos.
59	10 mos.	water, mamá, papá	2 yrs.
60	2 yrs.	bottle, papá, mamá	3 yrs.

Table 22

Language Characteristics of Group C

Child #	Age Spoke in Words	Words Spoken	Age Spoke in Sentences
16	9 mos.	mamá, papá	2 yrs.
17	1 yr. 6 mos.	mama	2 yrs.
32	9 mos.	agua, gata	1 yr. 4 mos.
33	1 yr. 6 mos.	Gaby, Lucy, daddy, mommy	3 yrs. 4 mos.
34	1 yr. 6 mos.	bottle, mama, papa	2 yrs.
40	4 mos.	ma	7 yrs.
41	1 yr.	mamá, papá	2 yrs.
42	9 mos.	mamá, papá	1 yr. 6 mos.
43	6 mos.	mamá	1 yr. 2 mos.
44	11 mos.	pampers, mama, daddy	2 yrs.
45	9 mos.	Oscar	1 yr. 6 mos.
46	9 mos.	teta, mamá, tata	1 yr. 6 mos.
47	1 yr. 6 mos.	papá, mamá	2 yrs.
48	1 yr.	mamá	2 yrs. 6 mos.
50	8 mos.	teta	1 yr. 6 mos.
51	1 yr.	papá	2 yrs.
53	1 yr. 4 mos.	----------	----------
56	10 mos.	comida, mamá, papá	1 yr.
57	9 mos.	comida, mamá, papá	1 yr.
58	----------	mamá, papá	2 yrs.

In summary, Group C had higher mean scores, Group B's means were in the middle range, and Group A demonstrated the lowest means on the BSMS, TTRVS, and the PEOPLE subtests of Auditory Sequential Memory, Sentence Repetition, and Encoding. Language dominance profiles indicate that a low percentage of the children in each group had consistent ratings on all three language dominance measures. Generally, the ratings were extremely inconsistent. On the language milestones reported by the parents Group C reached the milestones examined at an earlier age than Groups A and B. Group B reached those milestones later than Group A. This discrepancy could not be explained given the nature of the Groups.

Research Question 2: Will there be at least 90 percent agreement between the Diagnostic Groups and Expert Reviewers as to which children are language disordered and those who are not?

In order to answer the question of whether there was agreement between the Diagnostic Groups and Expert Reviewers it became necessary to first examine the philosophical perspectives of the Experts, secondly to examine agreement among the Expert Reviewers, then to examine agreement among the Diagnostic Groups and

Table 23

Comparison of Group Language Milestones

Reported by Parents

	Age Words Spoken	Age Sentences Spoken
Group A	1 yr. 3 mos.	2 yrs. 6 mos.
Group B	2 yrs. 3 mos.	2 yrs. 6 mos.
Group C	10 mos.	2 yrs.

finally to examine the agreement between the Diagnostic Groups and Expert Reviewers.

Philosophical perspectives of Expert Reviewers on the language assessment of bilinguals. A great deal of emphasis was placed on the classifications made by the Expert Reviewers because of their experience and knowledge in the language assessment of bilingual children. They were to review the data on the 60 children and determine whether they were: (1) Not Language Disordered; (2) Borderline/at risk; (3) Not Language Disordered - No Apparent Language Problem; or (4) Not Language Disordered - Second Language Acquisition Problems. They were also to make recommendations about the data which they found to be most useful in helping them reach their decisions on the classifications.

In order to get an idea of the philosophical perspectives from which the Expert Reviewers would be basing their decisions, the questionnaire developed by the Bilingual Language Learning System (BLLS) was administered to them. Five of the Expert Reviewers responded to 97% or more of the questions with responses acceptable by the Bilingual Language Learning System training.

Generally, the Expert Reviewers had similar views and agreed on the essential aspects of the bilingual language assessment process. There was some disagreement as to whether the child should be tested in the second language after passing the screening in the primary language or whether the child automatically passes the screening. Some disagreement also occurred concerning how English scores should be used (see Table 24). Table 25 demonstrates that a large percentage of Reviewers agreed on some general priniciples of dual language development. In Table 26 it is demonstrated that the Experts agreed on the limitiations of discrete tests. Only 50% of the Experts felt that discrete tests were culturally biased. It is the researcher's opinion are that the Expert Reviewers were generally extremely knowledgeable about the assessment of bilingual children. Their experiences, training, and professions also added to the high caliber of expertise that they demonstrated.

Table 24

Expert Perspective on Bilingual Language Assessment

	% Agreeing
Results of evaluating the Spanish-English child's speech and language are influenced heavily by the examiner.	100%
A translated test is not suitable for administering to individuals who speak the translated language.	100%
The bilingual Hispanic child should be assessed in both Spanish and English.	83%
Public law 94-142 does not mandate that each child be tested in the language which the child uses in school.	100%
Three alternative settings to the clinical setting for assessing the Spanish/English child included, home, classroom, playground.	100%
If the child passes the speech-language screening in the dominant language he must be screened in the second language.	60%
If the child passes the speech-language screening in the dominant language he automatically passes.	60%
Scores obtained in English can be used with caution.	60%
Scores obtained in English cannot and should not be used.	60%

Table 25

Expert Perspectives

on Second Language Acquisition

	% Agreeing
In Children acquiring two languages one language does not always develops ahead of the other language.	83%
The bilingual child's language abilities may differ according to his/her immediate environment.	100%

Table 26

Expert Views on Problems

with Discrete Tests

	% Agreeing
Give a very limited view of language.	100%
Norming can be inappropriate.	83%
They are culturally biased.	60%
Do not examine natural communicative abilities.	83%
Do not take in consideration language charachertistics specific to some language children i.e., dialect, code switching, etc.	83%

Table 27

Number of Children Classified in Each Category by Expert Reviewers

	ND	CD-L	B/AR	NCD-L NP	NCD-L SLAP
Expert Reviewer I	0	8	41	0	11
Expert Reviewer II	3	15	28	11	3
Expert Reviewer III	0	14	21	18	7
Expert Reviewer IV	20	0	0	10	30
Expert Reviewer V	0	7	11	11	31

ND: Could not make decision on basis of data
CD-L: Language Disordered
B/AR: Borderline/at Risk
NCD-L/NP: Not Language Disordered--No Language Problem
NCD-L/SLAP: Not Language Disordered/Second Language Acquistion Problem

Agreement among Expert Reviewers. Table 27 illustrates the number of children classified in each category by the five Experts. Consistency was lacking in the number identified per categorization. There was no unanimous agreement by the five Expert Reviewers on 90% of all cases they reviewed. In fact, their classifications of the subjects varied considerably. In order to determine whether there was any agreement among the Experts the highest number of agreement was analyzed. This involved determining the coefficient of agreement among at least three Experts on the classification of each of the sixty children. The coefficient of agreement was .55 in this analysis.

When agreement among three Experts on whether children were Language Disordered, Borderline/at Risk and Not Language Disordered - No Language Problem was examined, a coefficient of agreement of .58 resulted. Under the Not Language Disordered category there were two classifications i.e., Not Language Disordered - No Language Problem and Not Language Disordered - Second Language Acquisition Problems. In the category of Not Language Disordered, including both classifications, there was 5% agreement among the Experts. They disagreed, however, about whether there were problems

which were related to second language acquisition or whether there was no problem present.

When the coefficient of agreement among two Experts per child was determined, the coefficient was .98. This is misleading, however, since agreement among Experts existed for two separate categories for 41% of the children. When this is taken into consideration, a coefficient of agreement of .57 resulted in cases in which two Experts agreed on a single category and a separate classification did not exist among two other Experts.

Agreement among Diagnostic Groups. Table 28 demonstrates that there was some consistency in the number of children classified in each category, especially in the CD-L and NCD-L/SLAP categories. There were differences in the classifications among the Diagnostic Groups when compared with those made by the Expert Reviewers. The coefficient of agreement for a unanimous decision in the classification of the children was .38. This included the agreement on the two Not Language Disordered Categories, i.e., Not Language Disordered/No Language Problem and Not Language Disordered - Second Language Acquisition problems. When only three categories: Language Disordered; Borderline/At Risk; and Not Language

Table 28

Number of Children Classified in Each Category by Three Diagnostic Groups

	ND	CD-L	B/AR	NCD-L NP	NCD-L SLAP
Group 1	1	6	6	31	16
Group 2	1	7	13	23	16
Group 3	11	4	4	20	20

ND: Could not make decision on basis of data
CD-L: Language Disordered
B/AR: Borderline/at Risk
NCD-L/NP: Not Language Disordered--No Language Problem
NCD-L/SLAP: Not Language Disordered/Second Language Acquisition Problem

Disordered are considered, the coefficient of agreement was .63. In 15% of these cases there existed a discrepancy in agreement as to whether children who were not language-disordered did not demonstrate any language difficulties or whether they demonstrated language difficulties associated with a second language acquisition process. The coefficient of agreement among two out of the three Diagnostic Groups in the categories was .83.

Comparison of agreement between Diagnostic Groups and Expert Reviewers. The coefficient of agreement between the Expert Reviewers and Diagnostic Groups was determined by analyzing majority consensus on the classifications made among the Experts and among the Diagnostic Groups as separate groups. When the consensus classification between both groups was the same, it was determined that both groups were in agreement about a common classification (see Table 29). The coefficient of agreement between the Expert Reviewers and the Diagnostic Groups in this type of analysis was .22.

There was a greater coefficient of agreement among the 3 Diagnostic Groups than among the Expert Reviewers. The Expert Reviewers did not have any

Table 29

Majority Decisions By Expert Reviewers and Diagnostic Groups on Each Case

Child #	Diagnostic Groups	Expert Reviewers	Child #	Diagnostic Groups	Expert Reviewers
1	CD-L	CD-L *	16	NCD-L/SLAP	NCD-L/SLAP
2	NC	CD-L	17	NCD-L/NP	NCD-L/NP *
3	NCD-L/SLAP	NC	18	NC	NC
4	NCD-L/NP	NC	19	NCD-L/NP	NC
5	NCD-L/SLAP	NC	20	NC	B/AR
6	NCD-L/NP	NCD-L/NP *	21	NCD-L/NP	B/AR
7	NC	NC	22	CD-L	CD-L *
8	NCD-L/NP	NC	23	NCD-L/NP	NC
9	NCD-L/SLAP	NC	24	NCD-L/SLAP	NC
10	NCD-L/NP	NCD-L/SLAP	25	NC	B/AR
11	NCD-L/SLAP	NCD-L/SLAP *	26	NCD-L/NP	B/AR
12	NC	B/AR	27	B/AR	NC
13	NCD-L/NP	NC	28	NCD-L/SLAP	NC
14	NCD-L/SLAP	NC	29	NC	CD-L
15	NCD-L/SLAP	B/AR	30	B/AR	NC

*Consensus between Groups and Experts
CD-L: Language Disordered
B/AR: Borderline/at Risk
NCD-L/NP: Not Language Disorder--No Language Problem
NCD-L/SLAP: Not Language Disordered/Second Language Acquisition Problem
NC: No Consensus by Majority
ND: No Decision

Table 29

Consensus and Expert Reviewers and

Diagnostic Groups--continued

Child #	Diagnostic Groups	Expert Reviewers	Child #	Diagnostic Groups	Expert Reviewers
31	NC	B/AR	46	B/AR	NC
32	NCD-L/NP	NCD-L/NP *	47	NCD-L/SLAP	NC
33	NCD-L/SLAP	NC	48	B/AR	NC
34	NCD-L/SLAP	NCD-L/SLAP *	49	NC	NC
35	NCD-L/NP	NCD-L/NP *	50	NCD-L/SLAP	B/AR
36	NCD-L/NP	NC	51	NCD-L/SLAP	B/AR
37	NCD-L/NP	NCD-L/SLAP	52	NCD-L/NP	NCD-L/NP *
38	NC	NC	53	B/AR	NC
39	NCD-L/SLAP	B/AR	54	NCD-L/NP	B/AR
40	ND	B/AR	55	NC	CD-L
41	NCD-L/SLAP	NCD-L/SLAP *	56	NCD-L/NP	NCD-L/NP *
42	CD-L	NC	57	NCD-L/NP	NCD-L/NP *
43	NCD-L/NP	NC	58	CD	NC
44	NC	B/AR	59	NCD-L/SLAP	NC
45	NCD-L/SLAP	NCD-L/SLAP *	60	NCD-L/SLAP	B/AR

*Consensus between Groups and Experts
CD-L: Language Disordered
B/AR: Borderline/at Risk
NC: No Consensus
ND: No Decision
NCD-L/NP: Not Language Disordered--No Language Problem
NCD-L/SLAP: Not Language Disordered/Second Language Acquisition Problem

unanimous agreement on any classification while the coefficient of agreement among Diagnostic Groups on unanimous decisions was .38. When a majority consensus on decisions among the separate groups is analyzed the Expert Reviewers had a coefficient of agreement of .55 while that of the Diagnostic Groups was .83.

When agreement coefficients are figured among the Expert Reviewers and Diagnostic Groups, the coefficient was .22. On the basis of these data there was less than 90% agreement between the Diagnostic Groups and the Expert Reviewers on the classifications of the children. There was also less than 90% agreement among the Diagnostic Groups nor was there 90% agreement among the Expert Reviewers.

When the classifications in which there was agreement between the Expert Reviewers and the Diagnostic Groups are compared with the school classifications, the coefficient of agreement by all three was .17. There was agreement between Expert Reviewers, the Diagnostic Groups, and the schools in only 17% of the total 60 cases (see Table 30). This points to some very serious problems in the issue of identifying Spanish/English bilingual children with language disorders. If the children labelled as language disordered demonstrate pathological language

Table 30

Classification by School on Children with Classification Majority Decisions by Expert Reviewers and Diagnostic Groups

Child #	Diagnostic Groups & Expert Reviewers' Majority Decisions	School Classifications
1	CD-L	CD-L *
6	NCD-L/NP	CD-L
11	NCD-L/SLAP	NCD-L/SLAP *
17	NCD-L/NP	NCD-L/SLAP or NP *
22	CD-L	CD-L *
32	NCD-L/NP	NCD-L/SLAP or NP *
34	NCD-L/SLAP	NCD-L/SLAP or NP *
35	NCD-L/NP	NCD-L/SLAP or NP *
41	NCD-L/SLAP	NCD-L/SLAP or NP *
45	NCD-L/SLAP	NCD-L/SLAP or NP *
52	NCD-L/NP	CD-L
56	NCD-L/NP	NCD-L/SLAP or NP *
57	NCD-L/NP	NCD-L/SLAP or NP *

CD-L: Language Disordered
NCD-L/NP: Not Language Disordered No Language Problem
NCD-L/SLAP: Not Language Disordered/Second Language Acquisition Problems

behavior would there not be less discrepancy in the agreement by those who serve these children? The conclusions that can be drawn on the basis of the lack of consensus between the Diagnostic Groups and Expert Reviewers are that: (1) differences in philosophical perspectives could have led to a lack of consensus; (2) the test battery may have been unfamiliar to some individuals and could have added to the differences in interpretation; (3) the test battery may also be faulty and may not discriminate well enough to provide insight into the language skills of the children included in the study; and (4) the nature of the differences in the levels of language development and bilingualism made the task of distingushing the language disordered from the non-language disordered a most difficult task.

In addition, Diagnostic Groups appeared to be in more agreement over the classifications than the Expert Reviewers. This may have been due to the fact that the Diagnostic Groups made decisions on a group basis, whereas the Expert Reviewers were making individual decisions. It seems that the Expert decisions should have demonstrated more agreement since their experience and knowledge was greater than that of the Diagnostic Groups. The Diagnostic Groups had the advantage of working in the school districts from which the children

were drawn. They were more aware than the Experts, about the dialectal differences and the general language functioning of the population. The literature indicates that becoming familiar with the language community of the child can lead to better decision-making in a language evaluation process (Mattes & Omark, 1984). It is the researchers view that the Diagnostic Groups' knowledge of the children's language community indeed played a big role in their more consistent decisions. This seems to indicate that a less experienced and knowledgeable group of diagnosticians can make more consistent classifications of children on the basis that they know the children and are somewhat familiar with the child's language community.

Research Question 3: Will the discriminant analysis match child classification categories indicated by the Experts or by the child's initial categorization?

A discriminant analysis was performed on all 60 cases taking into account all of the evaluation data except the language samples in both languages. The language samples were excluded due to the inappropriateness of attempting to quantify them. Another reason for excluding the language sample was that some children did not give a sample in both languages. In cases in which

the child was monolingual in one language or the other a sample in the second language could not be obtained.

The discriminant analysis results classified all but one of the 60 cases in the same categories established initially.

The basic underlying principle of the discriminant analysis is to determine from which of the groups each individual could have randomly been drawn given a set of observations (Tatsouka, 1975). The classifications made on the basis of the discriminant analysis indicate that the majority of the children had assessment data that was most like that of the other children in the group into which they had initially been categorized. Only one child in Group A had a set of observations that resembled those of Group C. We can state that this particular child was misclassified on the basis of the observations included in the analysis. Table 31 indicates the number and percentages of children from each class which were classified across classes. It demonstrates that one child from A was placed in Group C or that one of the children in the language disordered group actually belonged in the comparison group.

The discriminant analysis did not agree with the classifications of the 60 children made by the Expert

Reviewers. The weighting of the observations did appear to distinguish between the different groups.

Table 31

Number of Observations and Percents Classified into Groups A, B, and C by Discriminant Analysis

	To Class A	B	C	Total
From Class				
A	19	0	1	20
	95.00	0.00	5.00	100.00
B	0	20	0	20
	0.00	100.00	0.00	100.00
C	0	0	20	20
	0.00	0.00	100.00	100.00
Total	19	20	21	60
Percent	31.67	33.33	35.00	100.00

Research Question 4: Can the assessment data predict classroom language performance?

A stepwise regression analysis was used to determine which variable in a model would be statistically significant in predicting classroom language as measured by the Teacher Checklist. A total of sixteen variables were analyzed. This included the Spanish/English Language Performance Screening (S/ELPS) Spanish and English scores, Home Bilingual Usage Estimate (HBUE) Spanish and English scores, Bilingual Syntax Measure in English (BSME), Bilingual Syntax Measure in Spanish (BSMS), Boehm in English (BE), Boehm in Spanish (BS), Toronto Test of Receptive Vocabulary in English (TTRVE), Toronto Test of Receptive Vocabulary in Spanish (TTRVS), Auditory Sequential Memory (ASM), Auditory Association (AA), Sentence Repeition (SR), Story Comprehension (SC), Encoding (E), and the Parent Questionnaire. Again, the language samples were not included in this analysis because of problems in quantifying them. A single test, the TTRVS, proved to be statistically significant ($F = 13.33$, $p < .05$) in predicting classroom language. The TTRVS accounted for 18% of the variance in classroom language. The most effective model in predicting classroom language included the BE and the

TTRVS ($F = 8.70$, $p < .05$). This model accounted for 23% of the variance in classroom language as measured by the Teacher Checklist.

The findings of this analysis are not particularly surprising since the most effective predictive model assesses areas of language that would be most likely to coincide with classroom requirements. The Boehm in English assesses knowledge of concepts and the ability to follow instructions. The TTRVS examines knowledge of Spanish vocabulary which could aid the child in transferring that knowledge into the acquisition of English vocabulary.

Research Question 5: Are there statistically significant differences between the three groups of children included in the study on the basis of the assessment data?

One-way analyses of variance were performed with the three groups as three levels of the independent variable and each of the different assessment measures as the dependent variable. The results of the analyses yielded a statistically significant difference between Groups A, B, and C on the Bilingual Syntax Measure--Spanish (BSMS), and all the subtests of the PEOPLE, i.e., Auditory Sequential Memory (ASM), Auditory

Association (AA), Sentence Repetition (SR), Story Comprehensive (SC), and Encoding (E).

On the BSMS, the differences were significant at the $p < .01$ level. A Newman-Keuls analysis yielded results that indicated that Group C was statistically significant from Groups A and B on the BSMS.

On the subtests of the PEOPLE test Group differences were also statistically significant at the $p < .01$ level on ASM, AA, SR, SC, and E. On all of the of the subtests Group C was statistically different from Groups A and B. Statistically significant differences between Groups A and B did not occur on any of the Newman-Keuls analyses per assessment measure.

Statistically significant differences between the Groups were not present on the Toronto Test of Receptive Vocabulary in English and Spanish (TTRVE and TTRVS), the Bilingual Syntax Measure in English (BSME), the Boehm in English or Spanish (BE and BS) or the Teacher Checklist (TC) and Parent Questionnaire (PQ).

The results of the ANOVA imply that on the Bilingual Syntax Measure in Spanish, Auditory Sequential Memory, Auditory Association, Sentence Repetition, Story Comprehension, and Encoding tests and subtests, differences greater than those expected by chance exist between Groups A, B, and C. The assumptions made are

that on these measures the mean scores discriminate between the three groups and that for populations similar to those included in the study these measures could discriminate. However, Group differences may be due to differences in language dominance which are difficult to determine on the language dominance measures.

Research Question 6: What types of information are most useful in the identification process?

The Expert Reviewers were given a Recommendation sheet on which they were to indicate which instruments they felt were most useful in helping them make their decisions (see Appendix N). They were also to make recommendations about other types of information they would have liked to have seen included or expanded on.

The Expert Reviewers were unanimous in their recommendation that only by using all of the data together could effective decisions be made in classifying the children. Two people indicated that the language samples were very important information. If the language sample was missing on a particular child they were "at a loss" in their decision-making. It appears that despite the fact that language samples were missing at times and only a sample in one language could

Table 32

ANOVA Comparisons of Groups A, B, and C on Different Measures

Source	SS	MS	F (df=2,57)
BSME	19	9	.46
BSMS	498	249	13.34**
BE	1795	898	2.16
BS	1066	533	2.31
TTRVE	541	271	1.07
TTRVS	1117	559	2.85
ASM	4864	2432	5.20**
AA	21817	10908	19.37**
SR	4143	2071	5.95**
SC	6185	3093	6.38**
E	13745	6872	13.06**
TC	16	8	0.26
PQ	60	30	1.52

** Significant at $p < .01$ level

be obtained they still served as valuable information for the Expert Reviewers. Two Experts indicated that the samples were useful because more than any other measure they provided information about the child's ability to communicate.

The Expert Reviewer's comments on additional information which they felt needed to be included or expanded on varied. There was consensus, however, on the inclusion of more English testing, more pragmatic data, and notations on present and previous academic/ instructional intervention. The information on the Home Bilingual Usage Estimate indicating who speaks what language to whom was also seen as important.

Research Question 7: Is the assessment procedure developed in this study valid and reliable in the identification of language disorders in Spanish/English bilingual children?

Validity has been defined as the determination of whether the measure accomplishes what it was intended to accomplish (Anastasi, 1982; Borg & Gall, 1979; Isaac & Michael, 1978). In most cases validity is examined when a researcher is interested in constructing an assessment instrument rather than developing a procedure. The

Table 33

Expert Recommendations

on Type of Information Needed

in Decision-Making Process

	n	%
All Evaluation Data Used in Project	5	100
More English Testing	5	100
More Pragmatic Data	3	60
Years Child Resided in US	2	40
Reason for Referral	1	20
Child Attitudes about English and Spanish	1	20
Grade Placement	1	20
Present and Previous Academic/Instructional intervention	3	60
Ecological Observations	1	20
More Extensive Language Samples	2	40
More Information in Derivation of IQ	2	40
Teacher's Cultural/Linguistic Sensitivity	1	20
More Indepth Developmental History	1	20
Academic Performance	1	20
School Attendance	1	20
Who Speaks, What language, to Whom	4	80

principles for determining validity can be applied in similar fashion in establishing the validity of a procedure. These principles include determining content validity, criterion-related validity and construct validity.

In order to determine the validity of an assessment procedure it becomes necessary to determine whether the procedure accomplishes what it was intended to accomplish. The procedure examined in this study was designed to discriminate the differences between Spanish/English bilingual children who are language-disordered and those who are not.

Construct validity. Construct validity refers to the extent to which the test measures a particular construct or theoretical trait (Anastasi, 1982). This study attempts to determine the construct validity of the language assessment procedure. Therefore, the construct to be considered is what constitutes language assessment of bilingual children in attempting to determine whether they exhibit pathological language behavior.

Linguists and interdisciplinarians studying areas related to language and language assessment have debated about what measureable language proficiency encompasses. An examination of what research indicated as important

aspects of language assessment in general and the of language assessments of bilingual children were reviewed in determining construct validity. This is discussed in more detail in Chapter II, however, the factors considered are reiterated in summary form here.

Researchers have identified areas such as use of grammar, knowledge of vocabulary, knowledge of concepts, integrative language skills, and pragmatic language skills as important aspects to be included in a language assessment (Erickson, 1981; Langdon, 1983). It is generally agreed that language proficiency is composed of several underlying abilities, knowledge systems, and skills (Chomsky, 1975; Hymes, 1972; and Oller, 1980). It has also been demonstrated in the literature that language assessment for the bilingual child should be done in the child's primary and secondary language (ASHA, 1983; Erickson, 1978; Mattes & Omark, 1984). The child's communicative competence as measured by a spontaneous language sample is important in any language assessment procedure (Gallagher, 1983; Miller, 1981; Wood, 1982). Parent interviews assessing language at home, as well as teacher checklists examining classroom language, can be included in the assessment of bilingual children (Omark, 1981).

The procedure adopted in this study has taken a large body of literature into consideration in determining what types of measures were included in the procedure. The use of instruments with the best technical qualities in the area they were designed to assess were used (Silverman, Noa, & Russell, 1978; Watson et. al., 1981). The procedure was supported by general recommendations made by authorities in the areas of linguistics, language disorders, language testing, and the assessment of language disorders in bilingual children.

Content validity. Content Validity involves the examination of the content to determine whether it includes those aspects of the domain that it was designed to assess. This can be done by using a number of methods including the systematic examination of sources related to the domain and the analysis of whether the test includes the content in those sources or by consulting with experts (Anastasi, 1982). In the validation of the assessment procedure, the researcher consulted with experts to determine whether the procedure had content validity.

The content validity of the procedure was determined by the Expert Reviewers' recommendations on

what type of measures were most useful in helping them make their decisions. One hundred percent of the Experts commented that decisions should only be made with all the measures included in the procedure. They also made recommendations about the type of information they felt needed to be added to the procedure. The majority of their recommendations dealt with an expansion on parent questionnaire information and more pre-diagnostic data such as, the child's instructional program modifications--if any, the number of years the child attended an ESL, bilingual, or other type of program, and the child's attitudes about Spanish and English. A repeated recommendation by the Expert Reviewers and the Diagnostic Groups was that more English testing needed to be included. The results of these recommendations indicate that while the procedure was useful in decision-making it was not complete. There were some gaps in measurement techniques and data thatwere included which left some questions unanswered for those making decisions.

Criterion-related validity. Anastasi (1982) describes criterion-related validation in the following manner:

> Criterion-related validation procedures indicate the effectiveness of a test in predicting an individual's behavior in specified situations. For this purpose, performance on the

> test is checked against a criterion, i.e., a direct and independent measure of that which the test is designed to predict (p. 137).

In attempting to determine the predictive validity of the procedure, the criterion of classroom language was used.

In a regression analysis the coefficient of predictibility was $R^2 = .31$ for all the measures included in the procedure. The dependent variable in the analysis was classroom language functions determined by the Teacher Checklist. The results indicated that 31% of the variance on the language measures could be explained by the variance in language functions of the children in the classroom as assessed by the Teacher Checklist. This was not statistically significant ($F = 1.76$; $p > .05$).

Reliability. Reliability refers to the consistency in the results of the individual being assessed by the instrument. The underlying computation is that of error of measurement or thefluctuation of the results (Anastasi, 1982). In determining the reliability of the procedure, the consistency of agreement in the classification of the 60 children among the Expert Reviewers, among the Diagnostic Groups, and between the Expert Reviewers and Diagnostic Groups was analyzed. This investigation attempted to establish whether reliable

decisions could be made using the procedure in the study.

When an agreement coefficient among the majority of the Expert Reviewers was established on whether children were Language Disordered, Borderline/at Risk, or Not Language Disordered the coefficient was .58. When a coefficient of agreement on a majority decision between the Diagnostic Groups was established for the three classifications, the coefficient was .83. The coefficient of agreement among Diagnostic Groups' and Expert Reviewers' decisions was .22.

While a coefficient of .83 for decisions made among the Diagnostic Groups is considered to be good, it is lower then the .90 which was proposed by the researcher as an acceptable reliability coefficient. Also, since an adequate coefficient occurred only in one of the three analyses, the reliability of the decisions made with the use of the procedure does not appear to be consistently adequate.

The results of these analyses indicate that the reliability of decision-making is higher in cases in which those making decisions using the procedure are familiar with the language community from which the children are drawn. Knowing about the language community of the child is considered to be of utmost

importance in discriminating language disordered from non-language disordered behavior in the linguistically different child (Mattes & Omark, 1984; Omark et al., 1981; Terrell & Terrell, 1983).

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This study was conducted to investigate the development and validation of an assessment procedure to determine language disorders in Spanish/English bilingual children. This chapter presents a summary of the procedures, participants in the study, and research findings. Finally, conclusions and specific recommendations are discussed.

The specific objectives of the study were: (1) to determine the differences in the diagnostic profiles of the three groups of children; (2) to determine consistency in agreement between the Diagnostic Groups and the Expert Reviewers; (3) to determine whether the discriminant analysis would match Expert decisions or the child's initial group classification; (4) to determine whether the assessment data could predict classroom language use as perceived by the teacher; (5) to determine whether there were statistically significant differences between the three groups of children; and (6) to determine what types of information were most useful in the identification process. The underlying objective was to determine whether the assessment procedure was valid for determining language disorders in Spanish/English bilingual children. The

summary of the findings will address the objectives in the form of research questions.

Summary of Procedures

An ex post facto approach was used in the validation of the assessment procedure. The procedure attempted to incorporate a multidimensional approach assessing different areas of language, i.e., grammar, concepts, vocabulary, comprehension, oral directions, language dominance, pragmatics, and spontaneous language. Both formal and informal assessment were used in both English and Spanish.

Sixty children (20 language disordered, 20 children who did not qualify for placement, and 20 comparison group children) were included in the study. These children were tested using the assessment procedure. Home interviews were conducted with the parents in their homes to determine the child's language functions in the home in both languages. A Teacher Checklist was filled out by the classroom teacher to determine language in the classroom.

The five Expert Reviewers were blind to classification when they reviewed the assessment data on the 60 children and classified all of the children according to the data. They determined whether the children were

Language Disordered, Borderline/at Risk, Not Language Disordered--No Apparent Language Problem, and Not Language Disordered--Second Language Acquisition Problems. They also made recommendations about the procedure and its effectiveness in the decision-making process. After the Expert Reviewers classified the 60 students, three Diagnostic Groups engaged in the same type of process with the same 60 students. Coefficients of agreement were determined among the Expert Reviewers, among the Diagnostic Groups, and between the Expert Reviewers and Diagnostic Groups. The validity and reliability of the assessment procedure was determined by the consistency of agreements as well as the recommendations made by the Experts and Diagnostic Groups. An analysis of variance, regression analysis, and discriminant analysis were performed to further investigate the validity and the reliability of the procedure.

Summary of Participants

Subjects

The study included 60 bilingual Mexican American children between the ages of 7-10 from two school districts in Southern New Mexico. Sixty-two percent of the children had parents who were born in Mexico. The mean length of residency in the United States for the

families of these children was 9.3 years. The families had a mean of five children. The children who participated in the study had intellectual abilities within the average range (85-115 IQs). The mean IQ for the total group was 94.5. Thirty males and 30 females participated in the study. All of the children in the study had A, B, or C Lau Ratings. This indicated that their language dominance ranged from Spanish Monolingual to Bilingual according to the ratings.

Group A. Group A was composed of 20 children who had been classified as language disordered by the public schools. Eleven males and nine females were included in this group. The 7-10 age range was fairly evenly distributed. The largest percentage of the Group had Lau C ratings indicating that they were bilingual. Twenty percent of the children had Lau A ratings and 30% were Lau B. The mean age at which the first words were spoken was one year and five months. The mean age for speaking in sentences was two years and six months.

Group B. Twenty children who had been referred for a special education and language evaluation and did not qualify for placement as language disordered were included as Group B. This group consisted of 11 males and nine females and an even distribution of 7 to 10 year

olds. Forty-five percent of Group B had Lau C, 35% had Lau B, and 20% had Lau A Ratings. The children in this group had a mean age of 2 years and 3 months at which the first words were spoken. The mean age at which sentences were spoken was 2 years and 6 months.

Group C. Group C consisted 0f 20 children who were progressing normally academically and linguistically. Twelve females and eight males made up Group C. Seven and eight year olds were represented in larger numbers in the group than were nine and 10 year olds. The Lau Ratings for the Group indicated that Lau A's made up the highest percentage. Lau B's made up the next largest group and Lau C's were the least represented. One child did not have a Lau Rating. The mean of age for first words spoken was 10 months and that of the first sentences was two years.

Comparisons of A, B, and C. Comparison of Groups A, B, and C indicted that generally the groups were similar on factors needed for comparison, i.e., family characteristics, the distribution of males and females and age levels per group, as well as mean IQs. The Lau Ratings per group indicated that the children ranged from Spanish Monolingual to Bilingual according to the school personnel judgements.

If the parent reports of linguistic milestones are examined it appears that the mean age at which the first words and sentences were spoken is earlier for Group C. The mean age at which the first words were spoken is lower for Group A than Group B, however, there were no real differences in the mean age at which sentences were spoken. The linguistic milestones were accomplished earlier by Group C than for Group A and B. This would be expected for the comparison group.

Groups Reviewing Evaluation Data

The evaluation data were reviewed by a group of Experts and by Diagnostic Groups consisting of speech language pathologists and educational diagnosticians. These groups were to evaluate the data on the 60 children and make decisions as to their language classifications.

The Expert Reviewers

Expert Reviewers were selected on the basis of their expertise in the identification of language disorders in Spanish/English bilingual children. The individuals were regionally, nationally, and internationally recognized as knowledgeable in this area. Five Expert Reviewers ultimately participated in the study. These individuals worked in university and

non-university settings in California, Texas, New Mexico, Illinois, and Puerto Rico.

In order to determine the philosophical perspectives upon which they would base their decisions, the Bilingual Language Learning System Questionnaire was administered to them. All of the five Expert Reviewers answered 97% or more of the questions according to ASHA's guidelines on the language assessment of bilingual children. Generally, the Expert Reviewers had similar views and agreed on the essential aspects of the bilingual language assessment process.

The Diagnostic Groups

The Diagnostic Groups were composed of speech language pathologists and educational diagnosticians who were employed by the two districts from which the children were drawn. A total of three Diagnostic Groups reviewed the 60 children and classified them. Group 1 consisted of five educational diagnosticians and Group 2 was composed of two educational diagnosticians and two speech language pathologists. Group 3 was made up of two educational diagnosticians and two speech language pathologists who were part of a Bilingual Assessment Committee functioning in one of the school districts. The individuals in Group 3 were all bilingual.

Research Question 1: What are the differences in the diagnostic profiles of those children with language disorders, those with language difficulties because of a language difference, and those children who appear to not have any problem with language?

Raw and Standard Score Comparisons

Raw scores and standard score mean comparisons were made across groups. On the data that could not be translated to a standard score, the most visible differences in the means occurred on the Bilingual Syntax Measure in Spanish (BSMS). All three groups had means within the same range on the Bilingual Syntax Measure in English, the Teacher Checklist, and the Parent Questionnaire.

On the standard score data, group performance on the Toronto Test of Receptive Vocabulary in Spanish (TTRVS), the Auditory Sequential Memory (ASM), Sentence Repetition (SR), and Encoding (E) subtests of the PEOPLE produced results in which Group A received the lowest mean score, Group B received the middle ranged mean score, and Group C had the highest mean.

Language Dominance

The data on the Spanish/English Language Performance Screening (S/ELPS), the Home Bilingual Usage

Estimate (HBUE), and the Lau Ratings were examined to determine Group profiles in language dominance. A general finding was that the ratings were not consistent across measures. This was due to (1) the fact that Lau Ratings were outdated for many children and did not reflect current language dominance, (2) many of the Lau Ratings were not based on any testing information but had been derived from the parent or the teacher reports; (3) the HBUE reflected a determination of language use at home rather than the child's actual language abilities; and (4) the S/ELPS used some academic tasks which the children might have been more compelled to respond to in English rather than Spanish, thereby giving a distorted view of the child's language proficiency in Spanish and English.

In the comparison of the three groups, the majority of the children came from homes in which Spanish was the predominant or only language while the S/ELPS indicated that most children were English Dominant or English Monolingual. However, the Lau Ratings indicated that the majority of the children were Spanish Monolingual or Spanish Dominant. The final analysis of the language dominance data demonstrated the complicated nature of obtaining accurate and effective language dominance ratings on bilingual children.

Research Question 2: Will there be at least 90 percent agreement between the Diagnostic Groups and Expert Reviewers as to which children are language disordered and those who are not?

The coefficient of agreement between the Expert Reviewers and Diagnostic Groups was determined by analyzing majority consensus on the classifications made among the Experts and among the Diagnostic Groups. Unanimous decisions were nonexistent among the Expert Reviewers while only on a small portion of cases did the Diagnostic Groups agree unanimously. The majority decisions between the Experts and the Diagnostic Groups were compared. The coefficient of agreement for these majority decisions among both groups was .22.

The inferences that can be drawn on the basis of the lack of consensus between the Diagnostic Groups and Expert Reviewers are that: (1) differences in philosophical perspectives could have led to a lack of consensus; (2) the test battery may have been unfamiliar to some individuals and could have added to the differences in interpretation; (3) the test battery may be faulty and not discriminate well enough between the three groups; and/or (4) the nature of the differences in the levels of language development and

bilingualism made the task of distinguishing the language disordered from the nonlanguage disordered an impossible task.

Research Question 3: Will the discriminant analysis match child classification categories indicated by the Experts or by the child's initial categorization?

The discriminant analysis matched child classification categories as indicated by the child's initial categorization for all but one of the 60 children. This analysis indicates that the weighting of the data was different for the three groups. And that the three groups could be discriminate on the basis of the weighting of the data. The majority of the children had assessment data that resembled that of the other children in their initial category i.e., children who were language disordered, children who may have problems with language but are not disordered, and children who do not have any problems with language.

Research Question 4: Can the assessment data predict classroom language performance?

A stepwise regression analysis was used to determine which variable in a model would be statistically significant in predicting classroom

language as measured by the Teacher Checklist. The Toronto Test of Receptive Vocabulary in Spanish (TTRVS) proved to be the only statistically significant measure predicting classroom language. The most effective model included the Boehm in English (BE) and the Toronto Test of Receptive Vocabulary in Spanish (TTRVS).

Research Question 5: Are there statistically significant differences between the three groups of children included in the study on the basis of the assessment data?

One-way analyses of variance were performed with the three groups as three levels of the independent variable and each of the different assessment measures as the dependent variable. The analyses resulted in statistically significant differences at the $p < .01$ level between Groups A, B, and C on the Bilingual Syntax Measure in Spanish (BSMS) and all the subtests of the PEOPLE. Newman-Keuls analysis yielded statistically significant differences at the $p < .05$ level between both Groups A and B when compared with Group C on the Bilingual Syntax Measure in Spanish, Auditory Sequential Memory, Auditory Association, Sentence Repetition, Story Comprehension and Encoding. Group differences on these measures could be due to differences in language

dominance which cannot be detected due to an inconsistency in ratings on the HBUE, S/ELPS, and the Lau Ratings.

Research Question 6: What types of information are most useful in the identification process?

The Expert Reviewers indicated that decisions on all of the children could only be made using all the data from the assessment procedure. This implies that the procedure was useful in the identification process. They also indicated that they would have liked to have seen other types of data included and that sometimes they needed such data in order to make their decisions. These data included: (1) more English testing; (2) more pragmatic data; (3) present and previous academic and instructional interventions; (4) the years the child resided in the US; (5) more extensive language samples; and (6) more information on how the IQ score was generated.

Research Question 7: Is the assessment procedure developed in this study valid and reliable in the identification of language disorders in Spanish/English bilingual children?

Construct, content, and criterion-related valid-

ities was included in response to this question as well an examination of the reliability. Construct validity was determined by reviewing the literature and including measures that assess those aspects of language, which have been found to be necessary in the assessment of language proficiency. Construct validity was determined by drawing from research in a large number of areas.

Content validity was determined by not only ensuring that the procedure included measures suggested by the literature, but that the Experts' feedback would support such a procedure. The procedure fell somewhat short of its purpose in the inclusion of the most appropriate and effective measures. More prediagnostic data needed to be included. More English testing was also lacking.

Criterion-related validity was based on a regression analysis that analyzed the predictive validity of the model toward classroom language functions determined by the Teacher Checklist. The results were not significant.

Since no procedure can be considered valid without some consistency in the decisions made from it, reliability was also examined. Reliability was determined by analyzing the coefficients of agreement between the Diagnositic Groups, between the Expert Reviewers,

among the Diagnostic Groups and Expert Reviewers. The highest coefficient, which demonstrated consistency in agreement between Diagnostic Groups was .83. This was lower than the criterion of .90 set by the researcher. Coefficients of .58 between the Expert Reviewers and .22 among the Expert Reviewers and the Diagnostic Groups were considered to be too low in demonstrating any kind of reliability in the decision-making by using the procedure.

Conclusions

The researcher came to a number of conclusions concerning all those aspects related to the development and validation of an assessment procedure for determining language disorders in Spanish/English biingual children. This section covers the following areas: (1) conclusions regarding the children included in the study and the individuals who participated as validators of the data; (2) the conclusions about the performance of participants (subjects and validators); and (3) conclusions about the research questions.

Conclusions Regarding Study Participants

Participants in the study included the 60 children who were evaluated by the assessment procedure as well

as those individuals who acted as validators of the procedure. The validators were those individuals participating as Expert Reviewers and Diagnostic Groups.

Groups A, B, and C. The researcher regarded those variables such as intelligence, sex, family characteristics, and linguistic background as important factors to consider and control to a certain extent in subject selection. A complex sampling procedure was used to ensure that other variables, which had not been considered in the selection process, would also be controlled. Such considerations led to some very similiar groups with no vast discrepancies in any of the variables that could have confounded the results. The only differences were those dealing with the differences in the way diagnostic professionals and the school personnel viewed their language needs. For example, Group A was seen needing some form of language therapy, Group B appeared to have some language problems that were not language disorders and Group C was acquiring English as a second language, but had no language deficits. It seems that differences in performance on the assessment procedure could have thereby been attributed to the differences in the linguistic functioning and the language needs of the Groups. Unfortunately, the problems

of being able to accurately assess and determine the language dominance of the children and obtain a clearer picture of Group language dominance, greatly complicated the analysis of the results. It was difficult to ascertain whether group performance difference were due to language proficiences and deficiences or whether they were influenced by differences in language dominance. It became obvious that the children had learned English at varying rates and consequently the language dominance ratings that had been assigned by the school did not have any relevance to the child's dominance at the time of the study.

Expert Reviewers and Diagnostic Groups. The high caliber of the Expert Reviewers and the Diagnostic Groups was beyond the researchers' expectations. The Expert Reviewers were extremely well trained, experienced, and knowledgeable in diagnosing language disorders in Spanish/English bilinguals.

The individuals composing the Diagnostic Groups reflected differences in knowledge and experience in their decision-making. They had, however, worked in the communities of the children included in the study. This appeared to add to a greater consistency of agreement among the Diagnostic Groups on the

classifications of the 60 children. Familiarity with the language community appeared to aid in the more reliable decision-making.

Both the Expert Reviewers and Diagnostic Groups were interested in working with biliingual children. They also both demonstrated their interest by providing vast amounts of feedback on children they reviewed and by taking their time in making their decisions. Because these individuals were exceptional in their interest and knowledge, it would be expected that more agreement would have been reflected in their decisions than was demonstrated. The lack of consistency in agreement between the Expert Reviewers and the Diagnostic Groups appears to make a clear statement about the difficulties that are inherent in making decisions about language disorders in bilingual children and the problems that need to be realized in the diagnosis of these children.

Conclusion about Research Questions

All of the research questions related to establishing validity of the assessment procedure. The important points that resulted from the analyses of the questions are:

(1) Despite the fact that an effort was made to control for variables which could have affected the

results, an inability to obtain a consistent language dominance rating led to difficulty in analyzing the results.

(2) It was difficult to determine whether group performance differences were due to differences in language dominance or language deficiences.

(3) The Diagnostic Groups made more consistent decisions therefore it appears that familiarity with the language community aided in the more reliable decision-making.

(4) The lack of consistency in agreement between the Diagnostic Groups and Expert Reviewers implies that there are some real problems inherent in making decisions about whether bilingual children are language disordered.

(5) A number of factors added to the lack of agreement between the Diagnostic Groups and Expert Reviewers. These include; (a) differences in philosophical perspectives between Diagnostic Groups and Experts, (b) gaps in the data provided by the assessment procedure, (c) unfamiliarity with the test battery by the validators, and (d) the nature of bilinguals that made their assessment and the interpretation of the results difficult.

(6) It is possible that the nature of language, language assessment instruments, diagnostic procedures, and variation of characteristics among bilinguals make the development and validation of procedures for diagnosing language disorders an impossible task given the present state of the art.

(7) This investigation has not produced any recommendations about evaluation measures that appear to be more viable than others in discriminating differences in the language disordered and non-language disordered Spanish/ English bilingual child.

(8) Factors which may not have anything to do with pathological language behavior such as language dominance, language loss in the native language, IQ, socioeconomic backgrounds, familiarity with the type of tasks the tests require the child to do, family language dynamics, and other factors could

lead to differences in test performance which could be erroneously interpreted as pathological.

Despite the fact that the assessment procedure examined in this study did not prove to be valid, it must be pointed out that the procedure resulted in approximately a five to six hour evaluation of each child. The process included information concerning a number of language aspects of the child in school and in the home. Most language evaluations performed in the schools by diagnostic personnel do not include such a lengthy and extensive evaluation process. The conclusions of the study should certainly make diagnostic professionals question the validity of the procedures that they presently use in diagnosing Spanish/English bilingual children. Much dialogue has transpired recently concerning the manner in which bilingual language assessments should be done and the factors which need to be considered. The researcher attempted to establish some perspective on the problem by investigating the development and validation of a procedure. This investigation has not produced any recommendations on evaluation measures that appear to be more viable then others in discriminating differences in the language disordered and non-language disordered bilingual child. When measures did appear to

discriminate a possible reason for this could be attributed to another factor other than language disordered or non-language disordered behavior. This implies that diagnostic professionals should be extremely cautious in their interpretations of the bilingual child's performance on language tests since many factors could influence their scores. These factors may not have anything to do with pathological language behavior. Language dominance, IQ, Socioeconomic status, familiarity with the type of tasks the tests require the child to do, family language dynamics, and a number of other factors can influence the child's performance.

Recommendations

In the past, a suggested solution for dealing with biases in testing and testing procedures has been to ban the tests. This researcher believes that banning the tests is an unrealistic solution. Biases in tests and testing procedures need to be resolved by improving the instruments, the techniques, the procedures, and the processes involved in assessing culturally and linguistically different children.

Continued research needs to be done to determine whether there are other procedures that more effectively discriminate the differences between the language disordered and non-language disordered Spanish/English bilingual child. Until other procedures are examined with indepth analysis diagnosticians and school personnel can only speculate about their classifications of these children. Special educators should be interested in resolving the problem since not doing so will continue a legacy of uncertain decisions and misclassifications.

The procedure used in this study merits further investigation. The procedure assesses a number of areas of language and incorporates a multidimensional approach. Further study of the procedure should incorporate more English testing, developmental data, pragmatic assessment and other types of data as recommended in the previous chapter. This investigation has made it clear that the language evaluation to determine language disorders in the bilingual child is a long involved process. The evaluation should examine the child's language by using various methods and techniques, i.e., through tests, questionnaires, observations, checklists, and spontaneous language samples from home and school. Parents and teachers can provide

input on the child's abilities, however, it was demonstrated in the study that such information was not always insightful and should therefore be viewed with caution. Observations of the child's language functioning in certain situations can be an important addition to the language assessment procedure investigated in this study. In order to make the observations an effective part of the evaluation process, research needs to determine which language behaviors are important to observe.

The problems of obtaining accurate language dominance information presents difficulties in assessing language disorders in bilingual children. Accurate language dominance information is extremely important since it is directly useful in determining the type of testing that will be done in both languages and the interpretation of the results. A problem in obtaining an accurate language dominance rating is due to the techniques and methods that are most often used. Also the child might demonstrate different language dominance in different settings. Research needs to be continued to determine better methods for assessing this.

Lau Ratings are used to indicate the children's language dominance in the primary and school languages so that they can receive appropriate educational

programs to aid in learning. The Lau Ratings are a direct result of the Lau vs. Nichols decision which stated that to teach a child in a language he did not understand violated the student's civil rights (Baca & Cervantes, 1984). Lau Ratings are important sources of information. The research uncovered a real problem with the Lau Ratings of the children in the study since they were not updated on a regular basis. Future research should investigate whether the problems with the Lau Ratings in this study are common to other school districts who serve a bilingual population. If so, the practice and rationale for assigning bilingual children Lau Ratings should be reexamined.

Further research is also needed in examining the language of bilingual children concerning native language loss and progress in acquiring a second language. The literature indicates that language loss occurs as a phenomenon in a bilingual community in which there is pressure to acquire the second language, however, we do not know what implications this has for normal and language disordered bilingual children.

The disparity between the home language of the child and the requirements and pressures of the school environment merit some attention. In this study most of the children came from homes in which Spanish was the

only or predominant language. In the school the majority of them heard and spoke only English. The effect that the differences in language use in the two environments had on test performance as well as actual proficiency levels is yet to be determined.

The findings in the study demonstrate the complexity of attempting to develop and validate a procedure. The need to establish some validity in the diagnosis of language disorders in Spanish/English bilingual children appears to be obvious, however, it will take much research in the area to ultimately determine what diagnosticians should include in the evaluation.

References

Anastasi, A. (1982). Psychological Testing. New York: Macmillan Publishing Co., Inc.

ASHA. (1983). Bilingual Language Learning System. Rockville, MD: American Speech and Hearing Assoc.

Baca, L. M. & Cervantes, H. T. (1984). Bilingual special education: a juridical perspective. In L. M. Baca & H. T. Cervantes(Eds.), The bilingual special education interface (pp. 56-73). St. Louis: Times Mirror/Mosby College Publishing.

Baecher, R. E. (1982). Language proficiency assessment: issues and definitions. In S. S. Seidner (Ed.), Issues of language assessment: foundations and research (pp.93-100). Evanston, IL: Illinois State Board of Education.

Baetens Beardsmore, H. (1982). Bilingualism: basic principles. London: J. W. Arrowsmith Ltd.

Bates, E. (1976). Pragmatics and sociolinguistics in child language. In D. Morehead and A Morehead (Eds.), Normal and Deficient Child Language (pp. 411-463). Baltimore, MD: University Park Press.

Ben-Zeev, S. (1984). Bilingualism and cognitive development. In N. Miller (Ed.), Bilingualism and language disability: assessment and remediation (pp. 55-80). San Diego, CA: College Hill Press.

Bikson, T. K. (1974). Minority speech as objectively measured and subjectively evaluated. (ERIC Document Reproduction Service No. ED 131 135).

Bloom, L. & Lahey, M. (1978). Language development and language disorders. New York: John Wiley & Sons.

Borg, W. R. & Gall, M. D. (1979). Educational research: an introduction. New York: Longman.

Brice Heath, S. (1984, November). Cross Cultural acquisition of language. Paper presented at the meeting of the American Speech and Hearing Association, San Francisco, CA.

Canale, M. (1983). On some dimensions of language proficiency. In J. W. Oller (Ed.), Issues in language testing research (pp. 333-342). Rowley, MA: Newbury House Publishers, Inc.

Carpenter, L. (1983). Communication disorders in limited and non-English proficient children. Los Alamitos, CA: National Center for Bilingual Research.

Carrow, E. (1972). Auditory comprehension of English by monolingual and bilingual preschool children. Journal of Speech and Hearing Research, 15, 407-412.

Carrow, M. A. (1957). Linguistic functioning of bilingual and monlingual children. Journal of Speech and Hearing Disorders, 22, 371-380.

Cazden, C. (1970). The situation: A neglected source of social class difference in language use. Journal of Social Issues, 26, 35-60.

Chomsky, N. (1975). Reflections on language. New York: Pantheon.

Cole, M. & Bruner, J. S. (1971). Cultural differences and psychological processes. American Psychologist, 26, 867-876.

Cole, M. L. & Cole, J. T. (1981). Effective Intervention with the language impaired child. Rockville, MD: Aspen Systems.

Conklin, N. F. & Lourie, M. A. (1983). A host of tongues: language communities in the United States. New York: The Free Press.

Cummins, J. (1979). Linguistic interdependence and the educational development of bilingual children. Review of Educational Research, 49, 222-251.

Damico, J. & Oller J. W. (1980). Pragmatic versus morphological/syntactic criteria for language referrals. Language Speech and Hearing Services in Schools, 11, 85-94.

Damico, J. S., Oller, J. W. & Storey, M. E. (1983). The diagnosis of language disorders in bilingual children: surface-oriented and pragmatic criteria. Journal of Speech and Hearing Disorders, 48, 385-394.

Darcy, N. T. (1953). A review of the literature of the effects of bilingualism upon the measurement of intelligence. Journal of Genetic Psychology, 82, 21-57.

De Johnson, T. H. (1976). Monolingual and bilingual development patterns. (ERIC Document Reproduction Service No. ED 172 512).

Dore, J. (1974). A pragmatic description of early language development. Journal of Psycholinguist Research, 3, 343-350.

Dulay, H. C., & Burt, M. K. (1974a). Natural sequences in child second language acquisition. Language Learning, 24, 37-53.

Dulay, H. C., & Burt, M. K. (1974b). Errors and strategies in child second language acquisition. TESOL Quarterly, 8, 129-136.

Duron, G. (1982). Sociolinguistic foundations of language assessment: a reaction. In S. S. Seidner (Ed.), Issues of language assessment: foundations and research (pp. 29-30). Evanston, IL: Illinois State Board of Education.

Erickson, J. G. (1981). Communicative assessment of the bilingual bicultural child: an overview. In D. R. Omark and J. G. Erickson (Eds.), Communication assessment of the bilingual bicultural child (pp. 1-24). Baltimore, MD: University Park Press.

Ervin-Tripp, S. M. (1974). Is second language learning like the first? TESOL Quarterly, 8, 111-127.

Evans, J. S. (1974). Word pair discrimination and imitation abilities of preschool Spanish-speaking children. Journal of Learning Disabilities, 7, 573-584.

Gallagher, T. M. (1983). Pre-assessment: a procedure accommodating language use variability. In T. M. Gallagher and C. A. Prutting (Eds.) Pragmatic assessment and intervention issues in language (pp. 1-28). San Diego,CA: College-Hill Press, Inc.

García, E. E. (1981). Bilingual development and the assessment of language impairment. Paper presented at the Council for Exceptional Children Conference on the Exceptional Bilingual Child. New Orleans, LA. (ERIC Document Reproduction Service No. ED 203 649).

García, E. E. (1983). Early childhood bilingualism. Albuquerque, NM: University of New Mexico Press.

García, R. L. (1974). Mexican American bilingualism and English language development. Journal of Reading, 24, 467-472.

Genesee, F. (1982). Psycholinguistic foundations of language assessment. In S. S. Seidner (Ed.), Issues of language assessment: foundations and research (pp. 31-36). Evanston, IL: Illinois State Board of Education.

Glad, D. & Others. (1979). A comparison of English language acquisition patterns in English monlinguals and bilingual children. Princeton, NJ: Educational Testing Service. (ERIC Document Reproduction Service No. ED 175 258).

Greenlee, M. Specifying the needs of a bilingual developmentally disabled population: Issues and case studies. TESL/Linguistics. (ERIC Document Reproduction Service No. ED 188 116).

Hernández-Chávez, E. (1983). Strategies in early second language acquisition and their implications for bilingual instruction. In E. E. Garcia (Ed.), The Mexican American child: language, cognition, and social development (pp. 3-18). Tempe, AZ:Center for Bilingual Education.

Hornby, P. A. (1977). Bilingualism: psychological, social, and educational implications, New York: Academic Press.

Hymes, D. (1972). On communicative competence. In J. B. Pride and J. Holmes (Eds.), Sociolinguistics. London: Penguin Press.

Imedadze, N. V., & Uznadze, D. (1967). On the psychological nature of child speech formation under condition of exposure to two languages. International Journal of Psychology, 13 (2), 129-132.

Isaac S. & Michael, W. B. (1978). Handbook in research and evaluation. San Diego, CA: Edits Publishers.

Kerlinger, F. N. (1973). Foundations of behavioral research. New York: Holt, Rinehart, Winston, Inc.

Krashen, D., Long, L., & Scarcella, R. (1979). Age, rate, and eventual attainment in second language acquisition. TESOL Quarterly, 13, 573-582.

Langdon, H. W. (1983). Assessment and intervention strategies for the bilingual language-disordered student. Exceptional Children, 50, 37-46.

Lambert, W. E. & Tucker, G. R. (1972). Bilingual education of children: the St. Lambert experiment. Rowley, MA.: Newbury House Publishers, Inc.

Leeman, E. M. (1981). Evaluating language assessment tests. In J. G. Erickson & D.R. Omark, (Eds.), Communication assessment of the bilingual bicultural child (pp. 115-128). Baltimore, MD: University Park Press.

Legarreta, D. (1979). The effects of program models on language acquisition by Spanish-speaking children. TESOL Quarterly, 13, 521-534.

Lesser, G. S., Fifer, G. & Clark, D. H. (1972). Mental abilities of children from different social-class and cultural groups. In C. S. Lavatelli and F. Stendler (Eds.), Readings in child behavior and development (pp. 261-270). New York: Harcourt Brace Jovanovich.

Linares, N. (1983). Management of communicatively handicapped Hispanic American children. In D. R. Omark and J. G. Erickson (Eds.), The Bilingual Exceptional Child, San Diego, CA: College Hill Press.

Locke, L. (1981). Issues and Procedure in the analysis of syntax and semantics. In J. G. Erickson and D. R. Omark (Eds.) Communication assessment of the bilingual bicultural child (pp. 43-76). Baltimore, MD: University Park Press.

Lucas, E. (1980). Semantic and pragmatic language disorders: assessment and remediation. Rockville, MD.: Aspen Systems.

Mattes, L. J. (1982). The identification of Spanish-speaking children with speech and language handicaps: an analysis of current assessment practices in speech. Unpublished doctoral dissertation, University of San Diego, California.

Mattes, L. J. & Omark, D. R. (1984). Speech and language assessment for the bilingual handicapped. San Diego, CA: College Hill Press.

Miller, J. F. (1981). Assessing language production in children. Baltimore, MD: University Park Press.

Oakland, T. & Matuszek, P. (1977). Using tests in nondiscriminatory assessment. In T. Oakland (Ed.), Psychological and educational assessment of minority children (pp. 52-69). New York: Brunner/Mazel, Inc.

Oller, J. W. (1983). Evidence for a general language proficiency factor: an expectancy grammar. (pp. 3-10). In J. W. Oller, Research in language testing. Rowley, MA.: Newbury House Publishers.

Oller, J. W. Jr. & Perkins, K. (1980). Research in language testing. Rowley, MA: Newbury House.

Ornstein-Galicia, J. L. (1982). Sociolinguistic foundations of language assessment. In S. S. Seidner (Ed.), Issues of language assessment: foundations and research (pp. 7-28). Evanston, IL: Illinois State Board of Education.

Padilla, A. & Liebman, E. (1975). Language aquisition in the bilingual child. The Bilingual Review/La Revista Bilingue, 2, 34-55.

Prutting, C. A. (1983). Assessing communicative behavior using a language sample. In D. R. Omark & J. G. Erickson (Eds.), The bilingual exceptional child (pp. 89-104). San Diego, CA: College Hill Press.

Ramírez, A. G. (1983). Assessing the bilingual proficiency of Mexican American pupils. In E.E. Garcia(Ed.), The Mexican American child: language cognition, and social development (pp. 43-56). Tempe, AZ: Center for Bilingual Education.

Rivera, C. & Simich, C. (1982). Language proficiency assessment: research findings and their applications. In S. S. Seidner (Ed.), Issues of language assessment: foundations and research (pp. 37-44). Evanston, IL: Illinois State Board of Education.

Sanathanan. L. P. (1975). Discriminant analysis. In D. J. Amick and H. J. Walberg (Eds.), Introductory multivariate analysis for educational psychological, and social research (pp. 236-256). Berkeley, CA.: McCutchan Publishing Corp.

Silverman, R. J., Noa, J. k., & Russell, J. C. (1978). Oral language tests for bilingual students: an evaluation of language dominance and proficiency instruments. Portland, OR: Northwest Regional Educational Laboratory.

Simoes, A. (1982). Issues of special educations language assessment for the limited-English proficient student. In S. S. Seidner (Ed.), Issues of language assessment: foundations and research (pp. 147-150). Evanston, IL: Illinois State Board of Education.

Southwest Educational Development Laboratory - SEDL. (1976). Spanish/English Language Performance Screening: Examiners handbook. Monterey, CA: CTB/McGraw Hill.

Tasouka, M. M. (1975). Classification procedures. In D. J. Amick and H. J. Walberg (Eds.), Introductory multivariate analysis for educational, psychological and social research (pp. 257-287). Berkeley, CA: McCutchan Publishing Corp.

Taylor, O. L. & Payne, K. T. (1983). Culturally valid testing: a proactive approach. Topics in Language Disorders, 3 (3), 8-20.

Terrell, S. L. & Terrell, F. (1983). Distinguishing linguistic differences from disorders: the past presentand future of nonbiased assessment. Topics in Language Disorders, 3 (3), 1-7.

Thorndike, R. L. (1982). Dilemmas in diagnosis. In S. S. Seidner (Ed.), Issues of language assessment: foundations and research (pp. 87-92). Evanston, IL: Illinois State Board of Education.

Troike, R. C. (1982). Zeno's paradox and language assessment. In S. S. Seidner (Ed.), Issues of language assessment: foundations and research (pp. 3-6). Evanston, IL: Illinois State Board of Education.

Valdés, G. (1982). Bilingualism in a Mexican-border city: a research agenda. In F. Barkin, E. A. Brandt, & J. Ornstein-Galicia (Eds.), Spanish, English, and Native American languages: bilingualism and language contact, New York: Teachers College Press.

Valdés-Fallis, G. (1979). Language diversity in Chicano speech communities: Implications for language teaching. Working Papers in Sociolinguistics, 54.

Watson, D. L., et al. (1981). Nondiscriminatory assessment test matrix. San Diego, CA: Los Amigos Research Associates.

Wiig, E. H. & Semel, E. (1984). Language assessment and intervention for the learning disabled. Columbus, OH.: Charles E. Merrill Publishing, Co.

Wood, M. L. (1982). Language disorders in school-age children. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Wyszewianski-Langdon, H. (1977). Determining a language disorder in a bilingual-Spanish-English population. Unpublished doctoral dissertation, Boston University, Massachusetts.

APPENDICES

Appendix A

Letter to Expert Reviewers

Dear Colleague,

You have been selected as a person who is knowledgeable and experienced in the assessment of language disorders in Spanish/English bilingual children. A study that is being sponsored by the New Mexico Center for Rural Education and has been funded by the U.S. Department of Education needs people like you to serve on an expert committee.

The experts in the study will be asked to review diagnostic information which has been mailed to them on 60 children and determine which children are language disordered and which are not (see enclosed abstract for more details). The scores on the assessment instruments will be organized on a profile so that the reviewer can get a complete view of the formal assessment results at a glance. A language sample, a home questionnaire, a teacher observation questionnaire, and all the test protocols will also be included for additional information. The expert will be asked to examine the information and make a decision on each case. A brief write-up on the types of information which were generally most useful in the decision-making and the rationale behind their usefulness should be enclosed by each expert after they have reviewed all the cases. The experts will be paid a complimentary fee of $200.00 for their participation in the study. As a participant you will only be identified by a brief biographical sketch in the study and not by name. All the information you provide will be kept strictly confidential. You will also receive the results of the study which may be useful information in your work in the assessment of Spanish/English bilinguals.

Please fill out the reply form which is enclosed and return it in the self-addressed envelope. Also, fill out the attached questionnaire and complete the biographical sketch ensuring that you include information on your experience, training, and/or related work with Spanish/English bilinguals. Thank you in advance for participating in this research project.

Sincerely,

Jack T. Cole, Ph.D
Director of the Center for
Rural Education

Josie De Leon, M.A.
Principal Investigator
of Study

Appendix B

EXPERT PARTICIPANT REPLY

PLEASE CHECK YOUR RESPONSE:

_____ I would like to be part of the Expert Committee

_____ I cannot be part of the Expert Committee

_____ I cannot be part of the Expert Committee but suggest that you contact the following person:

Name: _____

Address: _____

_____

_____

Phone #: _____

Experts need to have some training and expertise in language assessment, must be able to analyze language test protocols and language samples in Spanish and English, and must have experience working with Spanish/English bilingual children.

BIOGRAPHICAL INFORMATION

Appendix C

QUESTIONNAIRE*

Instructions: These questions are posed to obtain some information regarding your opinions about the language assessment of Spanish-speaking children acquiring English as a second language. Thank you for your time.

Part A. Indicate if the following statements are TRUE OR FALSE.

1. (T) (F) In children acquiring two languages, one language always develops ahead of the other language.

2. (T) (F) The bilingual child's language abilities may differ according to his or her immediate environment.

3. (T) (F) Results of evaluating the Spanish-English child's speech and language are influenced heavily by the examiner.

4. (T) (F) A translated test is suitable for administering to individuals who speak the translated language.

5. (T) (F) The bilingual Hispanic child should be assessed in both Spanish and English.

6. (T) (F) Cultural bias often results in inappropriate placement of Spanish-English children in speech and language treatment programs.

7. (T) (F) The bilingual child's age can be a determining factor in the choice of language for interventions of his or her communication disorder.

8. (T) (F) Public Law 94-142 mandates that each child be tested in the language which the child uses in school.

*Developed by the Bilingual Language Learning System (BLLS), The American Speech and Hearing Association, 1983.

Part B: Fill in the Blanks.

11. List four problems with discrete point tests for assessing the language of the bilingual child.
    a. _____
    b. _____
    c. _____
    d. _____

12. List three alternative settings to the clinical setting for assessing the speech-language hearing of the Spanish-English child.
    a. _____
    b. _____
    c. _____

13. Identify three disadvantages of using interpreters to perform the speech-language or learning assessment.
    a. _____
    b. _____
    c. _____

14. List 4 strategies for obtaining bilingual/bicultural speech-language pathologists and audiologists when there are none on the staff.
    a. _____
    b. _____
    c. _____
    d. _____

Part C - Select the most appropriate answer (choose only one)

15. If the child passes the speech-language screening in the dominant language
    a. he must also be screened in the second language
    b. he automatically passes
    c. he fails if failure occurs in the second language

16. Scores obtained in English when assessing the bilingual child in English
    a. can be used when linguistic and cultural adoptions have occurred
    b. can be used with caution
    c. cannot and should not be used

17. The interview with the parent or significant other should be conducted in the language selected
    a. by the examiner
    b. by the parent or significant other
    c. based upon the duration of time the parent has been in America

18. In providing the audiological assessment of the bilingual/bicultural child, the monolingual audiologist
    a. would not be able to provide the assessment
    b. could obtain and report accurate information
    c. should have specific knowledge as to the language dominance of the child

Appendix D

HOME INTERVIEWERS' TRAINING

Scheduling

*Call the parent to set up an appointment. Give them your options for times and let them make a choice. Remember that evenings and weekends may be the best for some families.

*Speak to the mother or father in the home. Identify yourself immediately.

*Call to confirm your appointment before leaving your house. This may save you time in the long run.

*Get clear and concise directions to the home and always take the phone number with you.

*Call if you need to cancel or if you will be late for any reason.

*It is usually best for all interviewers (especially males) to make the home visit when both the father and mother will be home. "I would like to visit when both you and your husband will be home, if possible". You can allow the parent to make that choice.

Making the Home Visit

*It is usually best to be a little formal at the onset.

*Never be familiar. Allow the interviewer some time to get used to you before becoming familiar.

*Do not sit down until asked to do so.

*Do not chew gum or smoke.

*Dress in comfortable but nice clothes. Do not overdo.

*Do not start administering the questionnaire until rapport has been established.

Establishing Rapport

*Establishing rapport is of utmost importance.

*If the interviewee appears to be uncomfortable or on guard at the onset, begin talking for a few minutes to allow the person(s) to observe you.

*Ask rather innocuous questions to get the interviewee used to the question and answer approach you will be using and to make them feel more at ease.

*When you are ready to begin asking questions on the questionnaire, let the interviewee know that you are doing so.

*Remember that in order to make someone else comfortable, you must demonstrate a certain degree of comfortableness and confidence with the situation yourself.

Administering the Questionnaire

*Ask the interviewee in which language they prefer to have the questionnaire administered before beginning. Do not assume.

*Eye contact can be important for rapport, but it may also make some interviewees feel uncomfortable. Take your cue from them.

*Ask the questions in such a way that they can be heard and understood clearly.

*Repeat the questions as often as needed.

*Write down all related responses to a question.

*Let the interviewee know that if at any time they do not understand a question, you will be glad to explain further.

*Impress upon the interviewee that on some of the questions they may need to think about the question for a few minutes and that this is fine with you. The important thing is that you get an accurate picture of the child's language.

*Do not assume anything about the interviewees or their situation on the basis of the questionnaire. Remember you are only examining a small portion their lives.

Ending the Interview

*Let the interviewee know that you have reached the end of the interview. "These are all the questions I have for you. Is there anything you would like to ask me"?

*Thank the interviewee for their time.

*Do not discuss any of the interviews with anyone. Remember that the interview is to remain STRICTLY CONFIDENTIAL!

Appendix E

Boehm Scoresheet

Spanish Boehm

1.____arriba
2.____por
3.____lejos
4.____al lado
5.____adentro
6.____algunas pero no muchas
7.____en el medio
8.____unos pocos
9.____más lejos
10.____alrededor
11.____encima
12.____más ancha
13.____más
14.____entre
15.____entera
16.____más cerca
17.____segundo
18.____esquina
19.____varias
20.____detras
21.____en fila
22.____diferente
23.____después
24.____casi
25.____mitad
26.____centro
27.____tantos
28.____lado
29.____comenzando
30.____otro
31.____parecidos
32.____ni el primero ni el último
33.____nunca
34.____debajo
35.____hace juego
36.____siempre
37.____de tamaño mediano
38.____derecho
39.____adelante
40.____cero
41.____sobre
42.____cada
43.____separados
44.____izquierda
45.____par
46.____salta
47.____iguales
48.____en orden
49.____tercera
50.____menos

English Boehm

1.____top
2.____through
3.____away from
4.____next to
5.____inside
6.____some but not many
7.____middle
8.____few
9.____farthest
10.____around
11.____over
12.____widest
13.____most
14.____between
15.____whole
16.____nearest
17.____second
18.____corner
19.____several
20.____behind
21.____row
22.____different
23.____after
24.____almost
25.____half
26.____center
27.____as many
28.____side
29.____beginning
30.____other
31.____alike
32.____not the first or last
33.____never
34.____below
35.____matches
36.____always
37.____medium-sized
38.____right
39.____forward
40.____zero
41.____above
42.____every
43.____separated
44.____left
45.____pair
46.____skip
47.____equal
48.____in order
49.____third
50.____least

Appendix F

PARENT QUESTIONNAIRE

Student #:_____ Date:_____

Interviewer's Initials:_____

1. Mother's Birthplace:_____

2. Father's Birthplace:_____

3. If born outside the United States, number of years residing in U.S.: Mother____ Father____

4. Number of children in the family_____

5. Position of the child in the sibling structure_____

6. Age child spoke in words_____

7. The first words the child said_____

_____

8. Age child spoke in sentences_____

9. Which language did the child speak first?_____

10. When spoken to in English the child most often responds in

_____

11. When spoken to in Spanish the child most often responds in

_____

12. Can your child ask you to give something or do something for him/her?

_____Yes
_____No, if yes...

a. How often does your child ask you or other people for things compared to other children of the same age?

_____As often as most other children
_____Less often than other children

b. Does your child ask people for things that do not make sense, for example, something your child knows the person cannot give?

_____No

13. Can your child understand direct requests or commands?
_____Yes

_____No, if yes...

a. How often does your child do what you ask?

_____As often as most children
_____Less often than most children

b. What types of request does your child respond to?

_____Almost all requests
_____Firm or repeated demands

14. Can your child verbally protest/complain?
_____Yes
_____No, if yes...

a. How often does your child protest/complain?

_____As often as most children
_____Less often than most children

15. Can your child say or act sorry?
_____Yes
_____No, if yes...

a. How often does your child say or act sorry?

_____As often as most children
_____Less often than most children

16. How often does your child use language to stand up for himself/herself when being accused of doing something wrong? (e.g., how often does your child defend himself/herself when being accused of doing something wrong)?

_____As often as most children
_____Less often than most children

17. Does your child interrupt conversations?
_____Yes
_____No, if yes...

a. How often do such interruptions occur?
_____As often as with most children
_____More often than with most children

18. How often does your child ask you irrelevant questions where an answer is already known?

_____As often as most children
_____More often than most children

19. Does your child frequently change the subject being discussed before a logical ending point has been reached?

_____No
_____Yes, if yes...

a. How often does your child change the subject being discussed?

_____As often as most children
_____More often than most children

20. Does your child use gestures instead of speaking?

_____No
_____Yes, if yes...

a. How often does your child do this?

_____As often as most children
_____More often than most children

21. Can your child argue?

_____Yes
_____No

22. Does your child take over conversations? (For example, does your child not let others have their turn when speaking?)

_____No
_____Yes, if yes...

a. How Often does your child do this?

_____As often as most children
_____More often than most children

23. Does your child simplify his/her speech when talking to babies or very young children?

_____Yes
_____No

24. Does your child thank people for doing things for him/her?

_____Yes
_____No

a. How often does your child thank others?

_____As often as other children
_____Less often than other children

25. Is your child bossy toward others, without considering their desires?

_____No
_____Yes

26. Can your child describe objects or events? (For example, can your child describe something that happened in school?

_____Yes
_____No, if yes...

a. How often does your child describe things to you?

_____As often as other children
_____Less often than other children

b. Are the descriptions easily understood?

_____Yes
_____No

c. Does your child seem to understand when you describe something?

_____Yes
_____No

Part II.

1. Can the child talk about something that he/she has done?

   Yes____, No____, if so, in what language?

   English Only_____, Spanish Only_____, Both but uses one or the other____, Mixes both____

2. Can the child talk about something that others have done?

   Yes____, No____, if so, in what language?

   English Only____, Spanish Only_____, Both Separately____

   Mixes Both____

3. Can the child listen to what others are saying?

   Yes____, No____, if so in what language?

   English Only____, Spanish Only____, Both Separately____

   Mixes Both____

4. Can the child remember what others have said?

   Yes____, No____, if so, in what language?

   English Only____, Spanish Only____, Both Separately____

   Mixes Both____

5. Can the child follow directions?

   Yes____, No____, if so, in what language?

   English Only ____, Spanish Only____, Both Separately____

   Mixes Both____

6. Can the child start a conversation with others?

   Yes____, No____, if so, in what language?

   English Only____, Spanish Only____, Both Separately____

   Mixes Both____

7. Can the child describe something?

Yes____, No____, if so, in what language?

English Only____, Spanish Only____, Both Separately____

Mixes Both____

8. When your child is talking about something does he/she stay on the same topic or change topics often?

Yes____, No____, if so, in what language?

English Only____, Spanish Only____, Both Separately____

Mixes Both____

9. Can the child answer questions?

Yes____, No____, if so, in what language?

English Only____, Spanish Only____, Both Separately____

Mixes Both

10. Can the child argue a point if he/she disagrees?

Yes____, No____, if so, in what language?

English Only____, Spanish Only____, Both Separately____

Mixes Both____

11. Can the child talk about how he/she feels?

Yes____, No____, if so, in what language?

English Only____, Spanish Only____, Both Separately____

Mixes Both____

12. Can the child tell you if he/she needs something?

Yes____, No____, if so, in what language?

English Only____, Spanish Only____, Both Separately____

Mixes Both____

13. Can the child talk about something that he/she plans to do?

Yes____, No____, if so, in what language?

English Only____, Spanish Only____, Both Separately____

Mixes Both____

14. Can the child pretend and talk about imaginary things?

Yes____, No____, if so, in what language?

English Only____, Spanish Only____, Both Separately____

Mixes Both____

15. Can your child direct requests or commands?

Yes____, No____, if so in what language?

English Only____, Spanish Only____, Both Separately____

Mixes both____

Appendix G

CUESTIONARIO PARA LOS PADRES

del estudiante:_____ Fecha:_____

Iniciales del entrevistante:_____

1. Lugar de nacimiento de la madre_____
2. Lugar de nacimiento del padre_____
3. Si nació fuera del los E.E.U.U., indique el número de años que ha vivido en los E.E.U.U._____
4. Número de hijos en la familia_____
5. ¿En qué lugar queda el niño entre sus hijos? (de primero a último)_____
6. Edad en que el niño empezó a hablar_____
7. Primeras palabras que dijo el niño_____

   _____
8. Edad en que el niño empezó a utilizar oraciones al hablar _____
9. ¿Qué idioma habló primero el niño?_____
10. Cuando se le habla en inglés, el niño generalmente responde en_____
11. Cuando se le habla en español, el niño generalmente responde en_____
12. ¿Puede su niño pedirle que le haga o que le dé algo?

    sí____, no____; si la respuesta es afirmativa

    a. Con qué frecuencia su hijo le pide o pregunta a usted o otras personas por algo, en comparación con otros niños de su misma edad?

       _____Tan frecuentemente como otros niños
       _____Menos/más que otros niños

    b. ¿Le pide su niño cosas a personas que no tienen sentido? Por ejemplo: algo que su hijo sabe que la persona no le puede dar?

       _____No
       _____Sí

13. ¿Puede su niño entender órdenes?

sí____, no____, si respuesta afirmativa

a. ¿Qué tan a menudo (frecuentemente) hace su niño lo que se le pide?

_____Tan frecuentemente como otros niños
_____Menos que otros niños

b. A qué tipo de órdenes responde su niño?

_____Casi todas las órdenes
_____Ordenes expresadas firmemente o repetidas varias veces

14. ¿Puede su niño verbalmente quejarse o protestar?

sí____, no____, si respuesta afirmativa

a. ¿Qué tan a menudo se queja o protesta su niño?

_____Tan frecuentemente como la mayoría de los ninos
_____Menos que la mayoría de los ninos

15. ¿Puede su niño pedir disculpas o sentirse arrepentido?

sí____, no____ (SRA)

a. ¿Qué tan frecuentemente pide disculpas su niño o se siente arrepentido?

_____Tan frecuentemente como la mayoría de los niños
_____Menos que la mayoría de los niños

16. ¿Qué tan a menudo se defiende su niño (verbalmente) cuando le acusan de haber hecho algo malo?

_____Tan frecuentemente como otros niños
_____Menos que la mayoría de los niños

17. ¿Interrumpe su niño las conversaciones?
si____, no____ (SRA)

a. ¿Qué tan frecuente son sus interrupciones?

_____Tan frecuente como otros niños
_____Mas frecuente que la mayoría de los ninos

18. ¿Qué tan a menudo su niño le hace preguntas irrelevantes o que no vienen al caso cuando ya sabe la respuesta?

_____Tan frecuentemente como otros niños
_____Mas frecuentemente que la mayoría de los ninos

19. ¿Cambia su niño frecuentemente el tema de una conversación sin que haya llegado a un final lógico?
sí____, no____ (SRA)

a. ¿Qué tan a frecuentemente cambia el tema de una conversacion?

_____Tan frecuentemente como otros niños
_____Más frecuentemente que la mayoría de los niños

20. ¿Usa su niño gestos para comunicarse en vez de hablar?
sí____, no_ _ (SRA)

a. ¿Qué tan frecuentemente hace esto?

_____Tan frecuentemente como otros niños
_____Mas frecuentemente que la mayoría de los ninos

21. ¿Puede discutir o discurrir su niño?
sí____, no____ (SRA)

22. ¿Se apodera su niño de las conversaciones? por ejemplo no deja que los demás hablen).

_____Tan frecuentemente como otros ninos
_____Menos que otros ninos

23. Modifica su niño su vocabulario o léxico cuando habla con bebés o niños más pequeños?

sí____, no____

24. ¿Da las gracias su niño a la gente cuando recibe algún favor?

sí____, no____ (SRA)

a. Que tan a menudo le da las gracias a la gente?

_____Tan frecuentemente como otros ninos
_____Menos que otros ninos

25. ¿Es mandón su niño con las demás personas sin consideras sus sentimientos?

sí____, no____

26. ¿Puede describir su niño objetos o eventos? (por ejemplo; puede describir algo que sucedió en la escuela?

sí____, no____ (SRA)

a. ¿Qué tan frecuentemente le describe o platica cosas su niño?

_____Tan frecuentemente como otros niños
_____Menos que otros niños

b. ¿Le salen bien las descripciones?

sí____, no____

c. ¿Parece entender su niño cuando usted le describe algo?

sí____, no____

Segunda Parte.

1. ¿Puede su niño hablar de algo que él ha hecho?

   sí____, no____

   Solo Inglés____, Solo Español____, Los dos idiomas igualmente pero separadas____, inglés y español junto____

2. ¿Puede su niño hablar de lo que han hecho otros?
   sí____, no____

   inglés____, español____. Los dos idiomas separadas____, inglés y español junto____

3. ¿Puede su niño escuchar y entender lo que dicen otros?

   sí____, no____

   inglés____, español____, los dos idiomas separadas____, inglés y español junto____

4. ¿Puede su niño recordar lo que otros han dicho?

   sí____, no____

   inglés____, español____, los dos idiomas separadas____, inglés y español junto____

5. ¿Puede el niño entender y seguir sus instrucciones?

   sí____, no____

   inglés____, español____, los dos idiomas separadas____, inglés y español junto____

6. ¿Puede el niño empezar una conversación con otros?

   sí____, no____

   inglés____, español____, los dos idiomas separadas____, inglés y español junto____

7. ¿Puede el niño describir algo?

   sí____, no____

   inglés____, español____, los dos idiomas separadas____, inglés y español junto____

8. ¿Cuándo su niño habla de algo, puede mantener sólo un tema o cambia de temas seguido?

inglés____, español____, los dos idiomas separadas____,
inglés y español junto____

9. ¿Puede el niño contestar preguntas?

sí____, no____

inglés____, español____, los dos idiomas separadas____,
inglés y español junto____

10. ¿Puede el niño disputar un punto si él no está de acuerdo con el punto?

sí____, no____

inglés____, español____, los dos idiomas separadas____,
inglés y español junto____

11. ¿Puede el niño discutir como se siente?

sí____, no____

inglés____, español____, los dos idiomas separadas____,
inglés y español junto____

12. ¿Le puede avisar el niño si necesita algo?

sí____, no____

inglés____, español____, los dos idiomas separadas____,
inglés y español junto____

13. ¿Le puede hablar el niño de algún plan que tenga?

sí____, no____

inglés____, español____, los dos idiomas separadas____,
inglés y español junto____

14. ¿Puede el niño pretender o hablar de cosas imaginarias?

sí____, no____

inglés____, español____, los dos idiomas separadas____,
inglés y español junto____

15. ¿Puede el niño pedir algo o mandar que le den algo?

sí____, no____

inglés____, español____, los dos idiomas separadas____,
inglés y español junto____

Appendix H

TEACHER CHECKLIST OF CHILD'S CLASSROOM LANGUAGE

Student #:_____ Sex:_____ Grade:_____

Please check the descriptive statements that apply to this student. It may be helpful to read through the statements and observe for specific instances when in doubt. Thank you!

____ 1. Frequently chooses to play alone.
____ 2. Frequently uses gestures or other nonverbal communication instead of speaking.
____ 3. Usually quiet and passive.
____ 4. Frequently speaks in single words or short phrases.
____ 5. Habitually chooses to sit in areas outside the mainstream of activity, e.g., back of room, etc.
____ 6. Gets perceivably nervous when asked to recite.
____ 7. Avoids speaking during "sharing" time.
____ 8. Rarely participates in class discussions.
____ 9. Rarely asks questions (when he/she does not understand something as a possible condition.)
____ 10. Rarely volunteers to answer questions in class.
____ 11. Frequently fails to follow directions, must have them repeated.
____ 12. Speaks in "choppy" sentences, leaving out words or parts of words or uses incorrect word order.
____ 13. Frequently mixes up sounds in words, e.g., "ephelant" for "elephant".
____ 14. Frequently misunderstands words.
____ 15. Has trouble remembering things.
____ 16. Uses immature or improper vocabulary.
____ 17. Listens but does not seem to comprehend.
____ 18. Unable to tell a comprehensible story or sequence of events.
____ 19. Gives inappropriate responses.
____ 20. Frequently unable to call forth an exact word.
____ 21. Draws attention to self by speech.
____ 22. Speech is unclear and difficult to understand.
____ 23. Omits sounds in words.
____ 24. Frequently asks to have words, questions, directions, etc. repeated.

Appendix I

Letter to Teachers

Dear Teachers:

You have received a teacher checklist which you should complete on the child whose name appears at the top. We ask that you check only those items which apply. If there is any question about the relevance of any item for that particular child as the item is stated, please do not check it. You are welcomed to make comments at the bottom of the checklist if you feel it is necessary in order that we might get a better understanding of the child's classroom language. Thank you for your cooperation and promptness on this matter.

Sincerely,

Josie De Leon

Appendix J

#_____ Sex:_____

Student Performance Profile Age:_____

Language Dominance	HBUE	Spanish Monolin.	Spanish Dominant		Apparent Bilingual		English Dominant		English Dominant
	SELPS	Spanish	Predominantly Spanish		Bilingual		Predominantly English		English
	BSM-E	No English	Receptive English		Survival English		Intermed. English		Proficient English
	BSM-S	No Spanish	Receptive Spanish		Survival Spanish		Intermed. Spanish		Proficient Spanish
Grammar Concepts Voc.	Boehm-E Form A	-3	-2-	-1	Mean	+1	+2	+3	
	Boehm-S Form B	-3	-2	-1	Mean	+1	+2	+3	
	TTRV-E	-3	-2	-1	Mean	+1	+2	+3	
	TTRV-S	-3	-2	-1	Mean	+1	+2	+3	
Spanish Language Expression & Perception	PEOPLE Auditory Sequential Memory	-3	-2	-1	Mean	+1	+2	+3	
	Aud. Assoc.	-3	-2	-1	Mean	+1	+2	+3	
	Sentence Repetition	-3	-2	-1	Mean	+1	+2	+3	
	Story Comp.	-3	-2	-1	Mean	+1	+2	+3	
	Encoding	-3	-2	-1	Mean	+1	+2	+3	
School Lang.	Teacher Checklist				Percentage of Inappropriate Lang. _____				
Home Lang.					Language Functions				
	Parent Questionnaire		English Only_____ Spanish Only_____ Both Separately_____ Mixes Both_____				Percentage Exhibited____ Most like Others____ Unlike Others ____		

*The standard scores on the TTRV and the Boehm have been translated from percentile scores. They should be interpreted with caution due to differences in standardization groups and since the nearest estimate is used. They are translated to provide an equal basis of comparison.

Appendix K

CHILD #:_____

TEST SCORES

	Raw Scores	Percentiles	Standard Scores*
Boehm - English Form A	_____	_____	_____
Boehm - Spanish Form B	_____	_____	_____
Toronto Test of Receptive Vocab. - English	_____	_____	_____
Toronto Test of Receptive Vocab. - Spanish	_____	_____	_____
Pruebas de Expresion Oral y Percepcion de la Lengua Espanola	_____	_____	_____
Subtest 1. Auditory Sequential Memory	_____	_____	_____
Subtest 2. Auditory Association	_____	_____	_____
Subtest 3. Sentence Repetition	_____	_____	_____
Subtest 4. Story Comprehension	_____	_____	_____
Subtest 5. Encoding	_____	_____	_____

*Standard scores have been converted to scores with a mean of 100 and a standard deviation of 15. This has been done to assist those individuals reviewing the scores in making comparisons which will hopefully help in their decision-making. The scores should be used with caution since they have been statistically extrapolated and do not take into consideration standardization group differences across tests. For additional information refer to the test scoresheets.

Appendix L

DEMOGRAPHIC INFORMATION

CHILD #:_____ SEX:_____

D.O.B.:_____ AGE:_____

IQ:_____

MOTHER'S BIRTHPLACE:_____

FATHER'S BIRTHPLACE:_____

YEARS IN U.S. IF BORN ELSEWHERE:_____

NUMBER OF CHILDREN IN THE FAMILY:_____

CHILD'S POSITION IN FAMILY STRUCTURE:_____

AGE FIRST STARTED SPEAKING:_____

FIRST WORDS:_____

AGE SPOKE IN SENTENCES:_____

Appendix M

CLASSIFICATION SHEET

Child #:_____

Check the classification that best applies to the child.

_____Language-Disordered

_____Borderline/At risk

_____Not Language Disordered - No language problem

_____Not Language Disordered - Second Language Acquisition Problems

Comments:_____

_____

_____

_____

_____

Appendix N

RECOMMENDATION SHEET

Instructions: This sheet is designed to obtain your feedback on the type(s) of assessment data which generally were most useful in helping you classify the children included in this study. Please check any combination of the types of data which you found to be most effective. Thank you!

_____Only all of the data used together

_____Home Bilingual Usage Estimate

_____Spanish/English Language Performance Screening

_____Bilingual Syntax Measure - English

_____Bilingual Syntax Measure - Spanish

_____Boehm - English

_____Boehm - Spanish

_____Toronto Test of Receptive Vocabulary - English

_____Toronto Test of Receptive Vocabulary - Spanish

_____PEOPLE Auditory Sequential Memory

_____PEOPLE Auditory Association

_____PEOPLE Sentence Repetition

_____PEOPLE Story Comprehension

_____PEOPLE Encoding

_____Teacher Checklist

_____Parent Questionnaire

_____Language Samples (Whatever the child could provide)

Comments:_____

_____

_____