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THE IDENTIFICATION OF SPANISH-SPEAKING CHILDREN WITH SPEECH
AND LANGUAGE HANDICAPS: AN ANALYSIS OF CURRENT ASSESSMENT
PRACTICES IN SPEECH AND LANGUAGE THERAPY PROGRAMS
WITH PROPOSED ASSESSMENT GUIDELINES

by

Lawrence Joel Mattes

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Education

University of San Diego

May, 1982

Doctoral Committee:

Dr. DeForest Strunk, Director
Dr. Robert Infantino
Dr. Donald Omark

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ABSTRACT

THE IDENTIFICATION OF SPANISH-SPEAKING CHILDREN WITH SPEECH AND LANGUAGE HANDICAPS: AN ANALYSIS OF CURRENT ASSESSMENT PRACTICES IN SPEECH AND LANGUAGE THERAPY PROGRAMS WITH PROPOSED ASSESSMENT GUIDELINES

by

Lawrence Joel Mattes
University of San Diego

Director: DeForest Strunk, Ed.D.

Problem

The objectives of this study were (1) to examine the procedures used by speech-language pathologists in identifying Spanish-speaking students with speech and language handicaps, (2) to determine the extent to which practicing speech-language pathologists are qualified to conduct these evaluations, and (3) to develop a comprehensive set of assessment guidelines.

Procedure

A 27-item survey instrument constructed by the researcher was distributed to 408 individuals in Los Angeles County, selected from the 1980 membership directory of the American Speech-Language-Hearing Association and the 1981 directory supplement. A total of 285 (69.85%) of the sur-

veys were returned, but 44 of these surveys did not meet the criteria for inclusion in this research. Thus, 241 (59.07%) of the returned questionnaires were included in the analysis.

A total of 154 survey respondents were employed in public school speech and language therapy programs. This sample was divided into four groups based on Hispanic enrollment in the school population served. The remaining 87 respondents were employed in clinical or educational settings other than public school speech and language therapy and were asked to respond only to survey questions relating to their background, qualifications, and training.

Results

Some of the major findings and conclusions of this research were the following: 1. The supply of Spanish-speaking speech-language pathologists is insufficient to meet the needs of Spanish-speaking students. 2. Most speech-language pathologists are able to ensure that Spanish-speaking children are tested in Spanish by bilingual speech-language pathologists or other bilingual personnel; the availability of speech and language therapy in Spanish, however, is limited. 3. Bilingual classroom instructional aides and other paraprofessionals are often used to administer articulation and language tests in Spanish. 4. Speech-language pathologists working in schools where Hispanic enrollment is high show evidence

of being better prepared (e.g., more fluent in Spanish) to assess Spanish-speaking children than speech-language pathologists working in schools with low Hispanic enrollment. 5. A variety of formal and informal test instruments are being used in assessment, including tests that have been developed locally. Commercially available Spanish language tests are often not providing the information needed to identify Spanish-speaking children with language handicaps. Commercially available Spanish articulation tests, however, are generally providing the information needed. 6. Conversational speech samples are often not a part of the assessment battery used with Spanish-speaking students. 7. Coursework in speech-language pathology has generally not provided information about Spanish speech and language tests.

Recommended Assessment Guidelines

The information obtained from the current study and from an extensive review of the literature was used to develop a recommended set of assessment guidelines. The guidelines include detailed recommendations for the use of test instruments with Spanish-speaking students. Also included are recommendations for the training and use of assessment personnel. Selected recommendations from the guidelines are these: 1. Spanish-speaking children should not be identified as handicapped based solely on scores derived from standardized test instruments.

2. Conversational speech samples should always be included in the assessment battery. 3. Training should be provided to Spanish-speaking personnel (e.g., bilingual classroom aides) selected to participate in the testing of Spanish-speaking children. 4. Academic degree programs designed to train speech-language pathologists should provide information relating to the use of test instruments and personnel in the assessment of Spanish-speaking students. 5. School districts should provide workshops on bilingual speech and language assessment relevant to identified needs.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS.....	iii
ABSTRACT.....	iv
LIST OF TABLES.....	xii
Chapter	
I. INTRODUCTION.....	1
Statement of the Problem.....	3
Development of the Study.....	5
Importance of the Study.....	7
Objectives of the Study.....	9
Assumptions of the Study.....	13
Limitations of the Study.....	13
Definition of Terms.....	14
Organization of the Dissertation.....	15
II. REVIEW OF RELATED LITERATURE AND RESEARCH.....	17
Historical Antecedents of Current Legislation..	18
Problems in Conducting Nondiscriminatory Evalu- ations.....	25
Oral Language Assessment of the Spanish-Speak- ing Child.....	35
Theoretical Frameworks for Bilingual Lan- guage Assessment.....	47
The Responsibilities of Speech-Language Pa- thologists in Assessing Spanish-Speaking Children.....	53
III. PROCEDURES FOR DATA COLLECTION AND ANALYSIS.....	59
Selection of the Survey Sample.....	60

Chapter	Page
The Survey Questionnaire.....	63
The Pilot Study.....	64
Procedures for Collection of Dissertation Data.....	67
Methods of Data Analysis.....	68
IV. ANALYSIS OF THE SURVEY DATA.....	71
Personal and Professional Background of Survey Respondents.....	71
Professional Employment of Survey Respondents..	72
Ethnic Background of Survey Respondents.....	75
Years Experience as a Public School Speech- Language Pathologist.....	75
Certification Status of Survey Respondents.....	77
Procedures Used to Assess Spanish-Speaking Stu- dents in Public School Speech and Language Therapy Programs.....	79
Research Question 1.1.....	83
Research Question 1.2.....	88
Research Question 1.3.....	92
Research Question 1.4.....	94
Spanish Articulation and Language Tests Used.....	94
Adequacy of Spanish Articulation and Lan- guage Tests.....	98
Research Question 1.5.....	103
Research Question 1.6.....	108
Personnel Used in Assessment.....	109
Competencies of Available Assessment Per- sonnel.....	127

Chapter	Page
Survey Respondents' Qualifications to Conduct Assessments with Spanish-Speaking Students...	131
Research Question 2.1.....	132
Research Question 2.2.....	134
Fluency in Spanish.....	134
Training in Bilingual Assessment Procedures.....	142
Survey Respondents' Comments and Suggestions Relating to Assessment Procedures.....	145
V. DISCUSSION OF THE FINDINGS AND PRESENTATION OF THE ASSESSMENT GUIDELINES.....	157
Discussion of the Findings.....	157
Use of Test Instruments with Spanish-Speaking Students.....	161
Roles and Responsibilities of Speech-Language Pathologists.....	161
Use of Bilingual Personnel Other than Speech-Language Pathologists in Assessment.....	171
Training of Speech-Language Pathologists for Roles in the Assessment of Spanish-Speaking Students.....	172
Assessment Guidelines.....	175
Conceptual Model for the Assessment Guidelines.....	176
Guidelines for Using Test Instruments in Identification.....	179
Guidelines Regarding the Roles and Responsibilities of Speech-Language Pathologists in Assessment.....	185
Guidelines for Using Bilingual Personnel Other than Speech-Language Pathologists in Assessment.....	188
Guidelines for Training Speech-Language Pathologists to Assess Spanish-Speaking Students	193

Chapter	Page
VI. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS.....	200
Summary of Procedures.....	201
Summary of Findings.....	202
Procedures Used to Assess Spanish-Speaking Students.....	202
Qualifications to Conduct Assessments with Spanish-Speaking Students.....	208
Summary of Guidelines.....	211
Use of Test Instruments.....	211
Roles and Responsibilities of Speech-Language Pathologists in Assessment.....	212
Using Bilingual Personnel Other than Speech- Language Pathologists in Assessment.....	212
Training Speech-Language Pathologists to As- sess Spanish-Speaking Students.....	213
Conclusions.....	214
Conclusions Regarding Test Instruments.....	214
Conclusions Regarding Assessment Personnel...	215
Conclusions Regarding Training of Speech- Language Pathologists.....	215
Recommendations for Further Research.....	217
BIBLIOGRAPHY.....	220
APPENDICES.....	227
Appendix A - Survey Instrument.....	228
Appendix B - Cover Letter for the Survey.....	236
Appendix C - Follow-Up Letter for the Survey.....	238
VITA.....	240

LIST OF TABLES

Table	Page
1. Number and percentage of survey respondents employed in public school speech and language therapy programs, full-day special education classrooms, and other settings.....	73
2. Ethnic background of the survey sample, as reported by the respondents on Question 2 of the survey.....	76
3. Years experience as a public school speech-language pathologist, as reported by survey respondents on Question 3 of the survey.....	78
4. Certification status of survey respondents, as reported on Question 5 of the survey.....	80
5. Segmentation of public school speech-language pathologists into four groups for data analysis, based on Hispanic enrollment in the school setting where speech and language therapy was conducted.....	82
6. Number and percentage of public school speech-language pathologists who responded "YES" to the question: "If children who speak Spanish as their dominant language are referred for testing to determine whether or not they have a handicap in speech sound articulation, would you be able to ensure that an evaluation is conducted in Spanish by a Spanish-speaking examiner?"..	84
7. Number and percentage of public school speech-language pathologists who responded "YES" to the question: "If children who speak Spanish as their dominant language are referred for testing to determine whether or not they have a handicap in oral language (e.g., vocabulary, syntax, etc.), would you be able to ensure that an evaluation is conducted in Spanish by a Spanish-speaking examiner?".....	86
8. Number and percentage of public school speech-language pathologists who responded "YES" to the question: "Do any of the schools that you serve administer articulation and language screening tests in Spanish to identify Spanish-speaking children who may require speech and language therapy?".....	89

Table	Page
9. Number and percentage of public school speech-language pathologists who responded "YES" to the question: "Are any of the schools that you currently serve able to provide speech and language therapy in Spanish to Spanish-dominant children with speech and/or language handicaps in their native language?".....	91
10. Number and percentage of public school speech-language pathologists reporting use of specific English articulation and language tests with Spanish-dominant students on Question 15 of the survey.....	93
11. Number and percentage of speech-language pathologists in public schools where speech and language evaluations had been conducted in Spanish who responded "YES" to the question: "Do you know the titles of any commercially available Spanish articulation tests and/or Spanish oral language tests that have been used at your schools to determine whether or not Spanish-speaking children have articulation handicaps and/or language handicaps?".....	95
12. Number and percentage of speech-language pathologists in public schools where speech and language evaluations had been conducted in Spanish who reported use of specific Spanish articulation and language tests with Spanish-speaking students on Question 24 of the survey.	97
13. Adequacy of specific Spanish articulation and language tests as measured by the percentage of "YES" responses (Question 24) to the question: "Has this test generally provided sufficient information to determine whether or not Spanish-dominant children have articulation/language handicaps in Spanish?".....	99
14. Number and percentage of speech-language pathologists in public schools where speech and language evaluations had been conducted in Spanish who responded "YES," "NO," and "I DON'T KNOW" to the question: "Are samples of Spanish-speaking children's conversational speech in Spanish ever used in assessment at your schools to identify speech and/or language handicaps?".....	104

Table	Page
15. Number and percentage of speech-language pathologists in public schools where speech and language evaluations had been conducted in Spanish who reported use of informal assessment procedures, locally developed tests, etc. on Question 26 of the survey.....	107
16. Number and percentage of public school speech-language pathologists who responded "YES" to the question: "Have you administered any commercially available tests to evaluate the Spanish-dominant child's ability to speak English?".....	110
17. Number and percentage of speech-language pathologists in public schools where speech and language evaluations had been conducted in Spanish who responded "YES" to the question: "Have any of the tests used to evaluate a child's communication skills in Spanish been administered by you?".....	112
18. Number and percentage of speech-language pathologists in public schools where articulation tests had been administered in Spanish who reported use of Spanish-speaking speech-language pathologists in articulation testing in response to the question: "Which of the following individuals have administered articulation tests in Spanish when children with possible articulation handicaps have been referred for testing?".....	114
19. Number and percentage of speech-language pathologists in public schools where articulation tests had been administered in Spanish who reported use of Spanish-speaking personnel other than speech-language pathologists in articulation testing in response to the question: "Which of the following individuals have administered articulation tests in Spanish when children with possible articulation handicaps have been referred for testing?".....	116

20. Number and percentage of speech-language pathologists in public schools where language tests had been administered in Spanish who reported use of Spanish-speaking speech-language pathologists in language testing in response to the question: "Which of the following individuals have administered language tests in Spanish when children with possible language handicaps have been referred for testing?"..... 119
21. Number and percentage of speech-language pathologists in public schools where language tests had been administered in Spanish who reported use of Spanish-speaking personnel other than speech-language pathologists in language testing in response to the question: "Which of the following individuals have administered language tests in Spanish when children with possible language handicaps have been referred for testing?"..... 121
22. Number and percentage of speech-language pathologists in public schools where speech and language evaluations had been conducted in Spanish who responded "YES," "NO," and "I DON'T KNOW" to the question: "Have persons who speak Spanish as their primary language ever been involved in administering articulation and/or language tests to Spanish-speaking children who have been referred for testing at your schools?"..... 124
23. Number and percentage of speech-language pathologists in public schools where speech and language evaluations had been conducted in Spanish who responded "YES," "NO," and "I DON'T KNOW" to the question: "Have persons who speak Spanish as their primary language ever been involved in interpreting test data obtained in speech and language evaluations conducted with Spanish-speaking children who have been referred for testing at your schools?"..... 126

24. Number and percentage of speech-language pathologists in public schools where speech and language evaluations had been conducted in Spanish who responded "YES" to the question: "Do the assessment personnel currently available to you have the competencies necessary to accurately identify Spanish-dominant children with articulation handicaps?"..... 128
25. Number and percentage of speech-language pathologists in public schools where speech and language evaluations had been conducted in Spanish who responded "YES" to the question: "Do the assessment personnel currently available to you have the competencies necessary to accurately identify Spanish-dominant children with language handicaps?" 130
26. Number and percentage of public school speech-language pathologists who responded "YES" to the question: "Do you have the knowledge necessary to identify English articulation errors that are commonly produced by children who come from homes where Spanish is spoken. (i.e., articulation errors resulting from differences in the English and Spanish sound systems.)?"..... 133
27. Number and percentage of public school speech-language pathologists who responded "YES" to the question: "Do you know Spanish well enough to transcribe and analyze syntax from tape-recorded samples of conversational speech in Spanish?"..... 135
28. Number and percentage of survey respondents working in settings other than public school speech and language therapy who responded "YES" to the question: "Do you know Spanish well enough to transcribe and analyze syntax from tape-recorded samples of conversational speech in Spanish?"..... 137
29. Number and percentage of public school speech-language pathologists who responded "YES" when presented with a list of five words from commonly used language dominance tests followed by the question: "Do you know Spanish well enough to administer vocabulary tests that require the examiner to comprehend nouns such as those listed above?"..... 139

Table	Page
30. Number and percentage of survey respondents working in settings other than public school speech and language therapy who responded "YES" when presented with a list of five words from commonly used language dominance tests followed by the question: "Do you know Spanish well enough to administer vocabulary tests that require the examiner to comprehend nouns such as those listed above?".....	141
31. Number and percentage of public school speech-language pathologists who responded "YES" to the question: "Did your previous coursework in speech and language pathology include subject matter relating to specific test instruments designed for use in evaluating the speech and language skills of Spanish-speaking students?".....	144
32. Number and percentage of survey respondents working in settings other than public school speech and language therapy who responded "YES" to the question: "Did your previous coursework in speech and language pathology include subject matter relating to specific test instruments designed for use in evaluating the speech and language skills of Spanish-speaking students?".....	145
33. Number and percentage of public school speech-language pathologists who responded "YES" to the question: "Have you attended any workshops relating to the identification of Spanish-speaking children with speech and language handicaps?".....	147
34. Number and percentage of survey respondents working in settings other than public school speech and language therapy who responded "YES" to the question: "Have you attended any workshops relating to the identification of Spanish-speaking children with speech and language handicaps?".....	149

CHAPTER I

INTRODUCTION

One of the urgent problems facing educational leaders in our school systems today is that of providing appropriate and relevant special education programs for handicapped Spanish-speaking students. It is a well recognized fact that Spanish-speaking students have, in the past, been misdiagnosed as "handicapped" and placed in special education programs based on the results of test instruments that do not take into account their linguistic or cultural backgrounds (Condon, Peters, and Suiero-Ross, 1979; Mercer, 1973). Condon et al. (1979) described the problem as follows:

Too many of these children (with normal learning potential) have been victimized by inappropriate measuring instruments and irrelevant instruction which have earned them the gratuitous labels of "slow learners," "non-readers," "emotionally unstable," or "mentally retarded," together with the corresponding assignment to Special Education classes. And, too many others, (with exceptionalities) have been deprived of the specialized instruction to which they are entitled because those same tests and instructional strategies have failed to uncover their particular handicap. Such a situation can no longer be tolerated. (pp. 181-182)

Increased immigration of Spanish-speaking families to this country for social, political, and/or economic reasons is creating unique challenges for the speech-language pathologist working in a public school setting. Children are

eligible for enrollment in speech and language therapy programs only if they demonstrate evidence of a speech and/or language handicap. It is often extremely difficult to determine whether a bilingual child's communication problem is due to temporary competition between two languages or to an underlying speech and/or language handicap that can be regarded as "pathological." A bilingual child must be viewed as handicapped only if the communication deficit is present in both languages (Glass, 1979). Burt, Dulay, and Hernandez-Chavez (1978) recommended that if the bilingual child's proficiency level in both languages is below what is normal for monolingual development in either language, he/she should be evaluated for a possible communication handicap:

Only if the child demonstrates low proficiency in both languages should the child be referred for further diagnosis, and even then it is the responsibility of the diagnostician to make sure that the demonstrated low proficiency is not attributable to biased instruments, the use of inappropriate dialectal norms in scoring, or circumstances that stifle a child's verbal initiative in either language. On the other hand, we must not permit the child's bilingualism to obscure real disorders, allowing them to go unnoticed and untreated. (p. 308)

Bilingual education programs provide opportunities for Spanish-speaking children to receive instruction in their dominant language. Evidence has been found that participation in these programs results in improved self concepts for the students (Lopez, 1973). Bilingual education programs, however, are generally not designed to serve as special education programs and may not be able to meet the

needs of handicapped children who require specialized instructional programs. Teachers in bilingual classrooms often emphasize oral language instruction but may not have the materials, time, or the expertise necessary to provide the intensive remedial programs needed by children who demonstrate speech and/or language handicaps in their native language.

Statement of the Problem

The Education for All Handicapped Children Act of 1975 (Public Law 94-142) guarantees all handicapped children the right to a free, appropriate public education. The law includes provisions granting children the right to receive a diagnostic evaluation in their native language:

...procedures to assure that testing and evaluation materials and procedures utilized for the purposes of evaluating and placement of handicapped children will be selected and administered so as not to be racially or culturally discriminating. Such materials or procedures shall be provided and administered in the child's native language or mode of communication, unless it is clearly not feasible to do so, and no single procedure shall be the single criterion for determining an appropriate educational program for a child. [P.L. 94-142, Section 612(5)(c)]

Many speech-language pathologists speak only English and are therefore unable to administer tests in other languages. Although teachers in bilingual education programs may be able to provide diagnostic information regarding children's linguistic proficiency in Spanish, they generally do not have the background in speech-language pathology necessary to identify children in need of speech and lan-

guage therapy.

The extent to which discrimination has occurred in the assessment of Spanish-speaking children for speech and language therapy programs has not yet been reported in the literature. It is possible that many Spanish-speaking students with speech and/or language handicaps are being denied the right to an evaluation in their dominant language because of a shortage of bilingual speech-language pathologists. It is also possible that speech-language pathologists are experiencing difficulty assessing the communication skills of Spanish-speaking students because of a lack of appropriate test instruments. The extent to which published speech and language assessment instruments are providing speech-language pathologists with the information needed to identify Spanish-speaking children with speech and language handicaps is an issue that warrants investigation.

There is a need for research designed to analyze procedures used by speech-language pathologists in identifying Spanish-speaking students with speech and language handicaps. There is also a need for research that can be used in the development of guidelines for conducting speech and language assessments with these children. The current study was designed to fulfill these research needs. The information reported in this dissertation should prove to be useful to educational leaders in their efforts to develop strategies for dealing with the complex problems involved

in assessing the Spanish-speaking child's oral communication.

Development of the Study

This section presents a brief overview of the design of the study and the rationale for the use of survey research procedures. A detailed description of the research methodology is presented in Chapter III.

Survey research procedures were used in the current study to obtain information regarding the personnel and procedures used by speech-language pathologists in conducting speech and language evaluations with Spanish-speaking students. A review of the literature and a pilot study conducted by the researcher prior to the current research revealed a variety of problems that may be making it difficult for many speech-language pathologists to appropriately evaluate Spanish-speaking students. The current study was conducted because of the researcher's interest in developing improved practices for testing the speech and language skills of children who speak Spanish. Guidelines for using test instruments and personnel in assessing Spanish-speaking children's speech and language skills were developed by the researcher based on information obtained from the survey and from the literature review. Guidelines for the training of assessment personnel were also developed.

The results of a pilot study were used in conjunction with input from professional educators to develop the sur-

vey instrument used in this research. This survey instrument was designed to provide information regarding the procedures used in conducting speech and language evaluations with Spanish-speaking students. Information regarding the training, work experience, and Spanish fluency of survey respondents was also obtained from the survey. Copies of the survey were mailed to members of the American Speech-Language-Hearing Association (ASHA) from Los Angeles County. Individuals who failed to return the survey were mailed a second copy of the survey instrument.

Public school speech-language pathologists were divided into four groups based on the percentage of students who were Hispanic in the school population served. The chi-square statistical procedure was used to examine the significance of differences between the four groups on the research questions. Based on an extensive analysis of the survey data, it was possible to identify problems being experienced by speech-language pathologists in using test instruments and personnel in the assessment of Spanish-speaking children. It was also possible to identify specific deficits in the training of speech-language pathologists that have direct relevance in the assessment of Spanish-speaking individuals.

Survey research relating to the education of bilingual student populations has focused primarily on issues in the development and implementation of instructional programs for the nonhandicapped child. Lack of adequate funds,

materials, inservice programs, and qualified teachers are among the problems that have been identified through survey research (Flores, 1969). Survey research has also revealed that perceptions of administrators regarding the instructional programs, services and materials needed by bilingual students are different from the perceptions of teachers (Lopez, 1978). These are among the issues that need to be considered in survey research relating to testing and teaching bilingual handicapped students.

Survey research makes it possible to identify educational needs. Guidelines relating to the assessment of Spanish-speaking children must be relevant to the needs of practicing speech-language pathologists if they are to be of any practical value. The survey instrument used in the current research made it possible to identify specific problems that have been experienced in conducting speech and language evaluations with Spanish-speaking children so that guidelines relevant to those problems could be developed.

The Importance of the Study

In a report entitled The Condition of Education for Hispanic Americans, Brown, Rosen, Hill, and Olivas (1980) reported that Spanish is used in four out of five Hispanic households and that one third of all Hispanics speak Spanish most of the time. Thus rather than blending into American society and culture, millions of Hispanics con-

tinue to speak their native language.

Brown et al. also reported evidence of the pattern of low academic achievement characteristic of the Hispanic population in this country. The data presented by these authors revealed that Hispanics between the ages of 14 and 19 were twice as likely not to have finished high school as whites in the same age range. Moreover, the dropout rate for Hispanics between 1972 and 1978 ranged between 15% and 19% while the dropout rate for whites remained level at about 8% during this period. Only 41% of the adult Hispanic population held a high school diploma.

The public schools must not neglect the educational needs of the growing population of Spanish-speaking students in the United States. Foote, Espinosa, and Garcia (1978) reported statistical data indicating that the population of Hispanic students attending public schools in California increased by 45% between 1967 and 1977. In 1977 Hispanics constituted 21.82% of California's total public school enrollment, and 43% of these Hispanic students attended public schools in Los Angeles County.

Since the current study was conducted in Los Angeles County, the researcher contacted the Office of the Los Angeles County Superintendent of Schools to obtain current data regarding the size of the Hispanic student population. This contact was made in March, 1982 and it was learned that 52% of the Hispanic students in California were attending schools in Los Angeles County.

The survey used in the current research was distributed in Los Angeles County because of the large Hispanic population in that area. It is important to ensure that all handicapped Spanish-speaking children in Los Angeles County are identified and that their needs are met. Research on current assessment practices can provide insights that will be useful in the development of improved methods for conducting speech and language evaluations with Spanish-speaking students.

Objectives of the Study

The current study had three specific objectives:

1. The first objective was to identify the procedures used in Los Angeles County to identify Spanish-speaking children with speech and language handicaps. The following research questions were studied:
 - 1.1 To what extent are speech-language pathologists able to ensure that speech and language evaluations are conducted in Spanish when Spanish-dominant children are referred for testing?
 - 1.2 To what extent are articulation and language screening tests being administered in Spanish to identify Spanish-speaking children with possible speech and/or language handicaps?
 - 1.3 What published English articulation and language tests are being used to assess Spanish-dominant children's proficiency in the English language?

- 1.4 What published Spanish articulation and language tests are being used, and to what extent are these tests providing sufficient information to determine whether or not Spanish-dominant children have handicaps?
 - 1.5 What assessment tools other than commercially available tests (e.g., conversational speech samples, locally developed tests, etc.) are being used to evaluate the speech and language skills of Spanish-speaking students?
 - 1.6 What assessment personnel (e.g., speech-language pathologists, bilingual instructional aides, etc.) are being used to evaluate the speech and language skills of Spanish-speaking students, and to what extent are these individuals perceived as competent in test administration and interpretation?
2. The second objective of this study was to determine the extent to which individuals returning the survey had the knowledge and skills necessary to conduct evaluations of Spanish-speaking students. The following two questions were studied:
- 2.1 To what extent do speech-language pathologists have the knowledge necessary to identify English articulation errors that are commonly produced by children who come from homes where Spanish is spoken?
 - 2.2 To what extent do speech-language pathologists in public school speech and language therapy programs

and survey respondents working in other clinical or educational settings have the fluency in Spanish and the training in bilingual assessment procedures necessary to evaluate the speech and language skills of Spanish-speaking students?

3. The third objective of this study was to develop a comprehensive set of assessment guidelines. The developed guidelines were derived from an analysis of the survey results and an extensive review of the literature. The guidelines include detailed recommendations in the following areas:

- 3.1 Recommendations for the use of test instruments in evaluating the speech and language of Spanish-speaking students.
- 3.2 Recommendations regarding the roles and responsibilities of speech-language pathologists in the assessment of Spanish-speaking students. Cultural background and fluency in Spanish were considered in the development of these guidelines.
- 3.3 Recommendations for the selection, training, and use of personnel other than speech-language pathologists (e.g., bilingual instructional aides) to administer speech and language tests to Spanish-speaking children.
- 3.4 Recommendations for the academic and clinical preparation of speech-language pathologists for roles in the speech and language assessment of Spanish-

speaking students. The completion of coursework relating specifically to the assessment of bilingual student populations is not currently listed as an academic prerequisite for the ASHA Certificate of Clinical Competence. Thus, speech-language pathologists may not always have formal training relevant to the assessment of bilingual student populations. Recommendations in this area relate both to academic preparation in colleges and universities and to training programs within the public schools (e.g., workshops on bilingual language assessment).

The guidelines derived from this research should prove to be useful to leaders in the field of education who are directly involved in the development of procedures for evaluating the Spanish-speaking child's speech and language skills. School districts should find the guidelines useful in the selection and use of test instruments and assessment personnel. Colleges and universities will benefit from those guidelines that relate specifically to the training of speech-language pathologists for roles in the assessment of Spanish-speaking children. If effective leadership is provided in the implementation of the assessment guidelines, these guidelines should facilitate the development of solution strategies for dealing with the complex problems involved in conducting speech and language evaluations with Spanish-speaking students.

Assumptions of the Study

1. Nondiscriminatory speech and language evaluations are possible with Spanish-speaking students if conducted by appropriately trained personnel, using assessment procedures that reflect the child's cultural and linguistic background.
2. Responses on the survey instrument used in this research accurately reflect the procedures used in conducting speech and language evaluations with Spanish-speaking students.

Limitations of the Study

1. Since the Hispanic population in Los Angeles County is predominantly Mexican-American, the results of the survey may have greater generalizability to Mexican-American student populations than to other Hispanic groups.
2. The assessment procedures used by individuals who completed the survey may be different from those used by individuals who failed to return the survey instrument. Therefore, the results may be generalizable only to individuals with personal characteristics similar to those of the responding sample in this research.
3. The results of the survey may be generalizable only to school settings served by speech-language pathologists who meet the criteria used to select survey respondents for this research (i.e., membership in the American Speech-Language-Hearing Association).

4. The assessment guidelines developed in this research are limited to issues covered in the survey instrument and in the review of the literature. Thus, the content of the guidelines relates specifically to issues regarding test instruments and assessment personnel.

Definition of Terms

1. Language proficiency. This term refers to the degree to which the child demonstrates competence in using the spoken language.
2. Dominant language. This term refers to the language in which the child communicates most effectively and with greatest fluency.
3. Spanish-speaking child. This term refers to a child who acquired Spanish in the home environment and is able to use that language for communication purposes. The child may be bilingual or he/she may speak Spanish only.
4. Bilingual child. This term, as used in reference to individuals from Spanish-speaking family backgrounds, refers to a child who acquired Spanish in the home environment and is able to use that language and English for communication purposes. The bilingual child may be Spanish-dominant, English-dominant, or may demonstrate equal proficiency in both languages.
5. Speech handicap. This term refers to a problem in articulation, voice quality (e.g., hoarseness), or stuttering in the dominant language that is severe enough for

the child to qualify for enrollment in a speech and language therapy program.

6. Language handicap. This term refers to a problem in syntax (sentence structure), semantics (meaning), or pragmatics (functional language use) in the dominant language that is severe enough for the child to qualify for enrollment in a speech and language therapy program.
7. Nondiscriminatory evaluation. This term refers to an approach to assessment in which test instruments and assessment personnel are selected and used in a manner that does not bias the test findings in favor of any one particular racial or ethnic group.
8. Public school speech and language therapy. This term refers to a program in which children identified as speech and/or language handicapped receive remedial speech and/or language instruction individually or in small groups for part of the school day.

Organization of the Dissertation

This study is divided into six chapters beginning with a broad overview of the research area and its background in Chapter I. The problem, importance of the study, design of the study, research objectives, assumptions, limitations, and definition of terms are all covered in this chapter.

Chapter II is a review of literature and research pertaining to issues in the identification of handicapped children from diverse cultural and linguistic backgrounds (e.g.,

issues in conducting speech and language evaluations with Spanish-speaking students).

Chapter III presents a description of the procedures used in developing the survey instrument and collecting the research data. The procedures used in data analysis are also described in this chapter.

Chapter IV presents the analysis of the research data obtained from the survey instrument.

Chapter V includes a discussion of the results of the survey and presents detailed assessment guidelines.

The final chapter, Chapter VI, presents a summary of the results of the study, conclusions drawn from the research, and recommendations for further study.

CHAPTER II

REVIEW OF RELATED LITERATURE AND RESEARCH

The purpose of this chapter is to review the research and literature relevant to the problem under investigation. Three areas of the literature relating to the educational assessment of Spanish-speaking students were explored. First, literature was reviewed relating to the historical antecedents of special education legislation guaranteeing all students the right to a nondiscriminatory evaluation in their native language or other primary mode of communication.

The second area of the review included literature relating to the problems encountered in conducting nondiscriminatory assessments with students from different cultures and linguistic backgrounds. Test instruments used, personnel involved in assessment, and procedures used in educational decision-making were all considered as they relate to the assessment of the Spanish-speaking child.

The third area of the literature review focused on issues in the communication assessment of Spanish-speaking students. Topics in this area of the literature review included the theoretical frameworks that have served as a basis for currently used assessment measures, the role of

the speech-language pathologist in assessing the Spanish-speaking child's oral language, and studies relating to the use of specific oral language assessment instruments with Spanish-speakers.

Historical Antecedents of Current Legislation

In a report published by the United States Commission on Civil Rights in 1971, it was revealed that the percentage of Mexican-American students reading below grade level in the fourth, eighth, and twelfth grades was twice that of Anglo students in each of these grades. Condon, Peters, and Suiero-Ross (1979) reported that the average educational record of children with Spanish surnames is characterized by "underachievement, academic retardation, achievement scores below the national level, a high dropout rate, and a minimal rate of college enrollment" (pp. 1-2).

This deplorable situation extends to special education where children from minority backgrounds have been over-represented in classrooms for the retarded. Mercer (1973, 1975) reported that the prevalence of children with Spanish surnames in classes for the retarded was four times greater than should have been expected. She argued that the intelligence tests used with these students were culturally biased and that they were not appropriate for use with children who did not share the same cultural traditions as the dominant Anglo-American society.

Until recently, learning problems were most often

attributed to "deficits" within the individual. This viewpoint has been replaced by conceptualizations which emphasize the learned nature of problems associated with most learning difficulties. Inappropriate assessment instruments, poor teaching, irrelevant educational programs, and failure to take into account cultural differences among students are all factors that may contribute to a child's learning problems (Jones and Wilderson, 1976).

The inappropriate labeling of minority group children as mentally retarded and the overrepresentation of these children in special education classrooms were described by Dunn (1968) in a classic paper:

The number of special day classes for the retarded has been increasing by leaps and bounds. The most recent 1967-68 statistics compiled by the US Office of Education now indicate that there are approximately 32,000 teachers for the retarded employed by local school systems—over one-third of all special educators in the nation. In my best judgment about 60-80 percent of the pupils taught by these teachers are from low status backgrounds— including Afro-American, American Indians, Mexicans and Puerto Rican American; those from nonstandard English speaking, broken disorganized and inadequate homes; and children from other non-middle class environments. This expensive proliferation of self contained special schools and classes raises serious educational and civil rights issues which must be squarely faced. It is my thesis that we must stop labeling these deprived children as mentally retarded. Furthermore we must stop segregating them by placing them into our allegedly special programs. (pp. 5-6)

Court cases challenging specific assessment practices have stimulated a concern regarding the need for improved methods of assessing minority group children. Oakland and Laosa (1977) discussed a variety of issues that were raised

by plaintiffs challenging the use of tests with minority group children. These issues are summarized below:

1. Assessment practices are discriminatory when the testing is not conducted in the dominant language of the child.
2. Tests are culturally biased in that they reflect Anglo middle class values.
3. The manner in which the test information is used is discriminatory.
4. Persons involved in testing are not fully sensitive to the effect of cultural and language variability in the testing situation.
5. Placement in special programs is often made based on minimal information about the student (e.g., intelligence tests).
6. Parental participation is often limited.

A court case that has had a major impact on policies regarding the assessment of children from minority group backgrounds is Diana v. California State Board of Education (1970). This case, as described by Oakland and Laosa (1977), was filed on behalf of nine Mexican-American public school students, ages eight to 13, who had been placed in classes for the mentally retarded in Monterey County, California based on IQ scores derived from the Stanford-Binet and the Wechsler Intelligence Scale for Children. When retested bilingually seven of the nine students no longer scored within the retarded range. The plaintiffs in the

case claimed that the original testing placed a heavy emphasis on verbal abilities in English. Moreover, they claimed that the test questions were culturally biased in favor of Anglo students. An out-of-court settlement was reached and it became mandated for schools to test children in their native language when English was not the language used in the home.

California State Assembly Bill 1825 added the following section to the Education Code in 1970:

6902.6 Before any minor is admitted to a special education program for mentally retarded minors established pursuant to this chapter, the minor shall be given verbal or non-verbal individual intelligence tests in the primary home language in which the minor is most fluent and has the best speaking ability and capacity to understand. Such tests shall be selected from a list approved by the State Department of Education.

This bill made it mandatory to evaluate language dominance before administering intelligence tests to children being considered for special education programs (Beringer, 1976).

In 1971, Covarrubias v. San Diego Unified School District was filed in California on behalf of 12 black and five Mexican-American students who had been incorrectly placed in classes for the retarded. A preliminary injunction was sought to prohibit the continuation of special education programs in San Diego until valid assessment procedures were developed (Condon, et al., 1979; Oakland and Laosa, 1977).

In northern California in 1971, the case of Larry P. v. Riles was filed on behalf of black elementary school children who had been wrongly placed into classes for the mentally retarded. The plaintiffs charged that they had been labeled "retarded" based on intelligence tests that were culturally biased. It was argued that the placement procedures violated the right to equal protection as described in the California Constitution and the Fourteenth Amendment of the United States Constitution. As a result of this case, an injunction was issued prohibiting the use of the Stanford Binet and the Wechsler Intelligence Scale for Children to place black minority group children in special education programs for the educable mentally retarded and the learning disabled (Beringer, 1976; Oakland and Laosa, 1977). The case was finally resolved in 1979 when the federal district court in northern California ordered that standardized intelligence tests cannot be used to identify black school children for placement in educable mentally retarded programs (Duffey, Salvia, Tucker, and Ysseldyke, 1981).

Plaintiffs for Chinese American students in San Francisco, California charged in Lau v. Nichols (1974) that failure to provide special language instruction to Chinese-speaking students violated Section 601 of the 1964 Civil Rights Act and the Fourteenth Amendment's equal protection clauses. The court ruled that the Chinese-American students were being denied a meaningful opportunity to participate in the educational program. A set of guidelines was issued as a

result of this case requiring bilingual programs at the elementary and intermediate school levels. The guidelines also specified that the language abilities of non- and limited-English-speaking children should be assessed so that instructional programs can be developed to meet their needs. Under these guidelines the school district was responsible for testing each student's linguistic ability in order to categorize him/her as being (1) a monolingual speaker of a language other than English; (2) predominantly non-English speaking; (3) bilingual; (4) predominantly English-speaking; or (5) a monolingual English speaker (Oakland and Laosa, 1977).

The Education for All Handicapped Children Act (Public Law 94-142) was passed in 1975. This law contains provisions requiring that a free and appropriate education be provided for all handicapped students and prohibits any form of discrimination against these individuals:

It is the purpose of this act to assure that all handicapped children have available to them, within the time periods specified in Section 612 (2) (B), a free appropriate public education which emphasizes special education and related services designed to meet their unique needs, to assure that the rights of handicapped children and their parents or guardians are protected, to assist states and localities to provide for the education of all handicapped children, and to assess and assure the effectiveness of efforts to educate handicapped children. [PL 94-142 Section 601 (b) (10)]

Public Law 94-142 calls upon states to comply with specific nondiscriminatory assessment practices in order to receive federal monies in support of education for handicapped children. Among the provisions which were intended

to meet the needs of culturally and linguistically different children are the following:

1. Testing is to be conducted in the child's native language or other primary mode of communication.
2. Test instruments must have been validated for the specific purpose for which they are used.
3. Test instruments are to be administered by appropriately trained personnel.
4. No single procedure is to be used as the sole criterion for determining an appropriate educational program for a student.

The Education for All Handicapped Children Act has important implications for the Spanish-speaking student. Children who speak Spanish as their dominant language must be tested in Spanish and those identified as "handicapped" must not be denied the right to receive special education. School districts must develop procedures to ensure that Spanish-speaking children are neither overrepresented nor underrepresented in their special education programs.

Public Law 94-142 applies to all special education programs, including speech and language therapy. Thus, communicatively handicapped Spanish-speaking children must be provided with an equal opportunity to receive speech and language therapy and must be tested in their dominant language. Legal action may be taken against school districts if Spanish-dominant children are placed in speech and language therapy based on evaluations conducted in English or in situ-

ations where these children are denied the right to receive therapy when a handicap is present.

If speech-language pathologists are to comply with Public Law 94-142, then assessment practices must be employed that do not discriminate against individuals from different cultural and linguistic backgrounds. The researcher conducted an extensive review of the literature and was unable to locate any previous studies of procedures used in speech and language therapy programs to identify Spanish-speaking children with speech and language handicaps. Thus, no information could be located regarding the extent to which discriminatory assessment practices have been used in testing Spanish-speaking students.

Problems in Conducting Nondiscriminatory Evaluations

Ebel (1975) reported that a test is biased if "when correctly administered and taken, it results in scores for some of the takers that rank them systematically lower or higher than they ought to be ranked, on the basis of true achievement, among the other test takers" (p. 6). "Thus, test instruments are biased if they systematically underestimate or overestimate an individual's true performance.

Dent (1976) specified four assumptions that need to be met if test scores are to be unbiased. These assumptions represent a definite source of bias when the test is used with a population other than the standardization population:

1. Individuals who take the test have the same set of experiences and these experiences are tapped by the test items.

2. Individuals who take the test have equal facility with the language in which the test is administered.
3. Individuals who take the test comprehend the questions in exactly the same way regardless of differential background experiences.
4. Individuals who take the test share the same value system.

Cervantes (1974) reported that standardized tests lack "ethnic validity." He argued that the most common faults of standardized tests are inadequate norm group representation, cultural bias, and language bias:

1. Inadequate norm group representation. Most standardized tests have been normed on an Anglo, English-speaking population and are therefore inappropriate for use with students who possess different cultural values and language characteristics. The predictive validity of a test is questionable for a particular population when that population is not represented in the standardization sample.
2. Cultural Bias. Correct responses on tests are often predicated on an experiential projection into the situation in question. Some children, for example, might be more likely to choose "coat" as being associated with "snow" rather than "toboggan" because of their experiential background.
3. Language Bias. Children cannot be expected to do well on tests written in a language that they do not under-

stand. If a child has difficulty understanding what is expected, failure is likely to be experienced.

Constructing nonbiased tests for use with bilingual student populations is an extremely difficult task. Mexican-Americans, for example, represent a heterogeneous group in which individuals vary widely in the degree to which they are affected by Mexican-American and Anglo cultures and values. Mexican-American students also possess multivariate socio-cultural and linguistic characteristics that need to be considered in educational assessment. Thus it is unlikely that a single test will be "unbiased" for all Mexican-American students because of the heterogeneity of the population. Cervantes asserted that the misuse of tests with Mexican-American students has served to perpetuate the belief that these students are "educationally deficient."

Drew (1979) reported that the procedure used to administer a test and test content are both factors that may give some students an advantage over others. The usefulness of a test can only be judged in relation to the objectives of the evaluation. The issue of "valid for what" must be considered.

If a child's problem can be completely accounted for by differences in language, culture, or lack of educational opportunity, he/she should not be considered handicapped (Tucker, 1980). To assess more adequately the abilities of minority students, efforts have been made to develop "culture-fair" and "culture-specific" tests. Culture-fair

tests do not require one to use language and measure "intelligence" based on symbolic responses to relationships among figures or designs. Culture-specific tests capitalize on socio-cultural and linguistic attributes of the particular population for which they were designed (Cervantes, 1974).

Both culture-fair and culture-specific tests have failed to demonstrate good predictive validity (Duffey, Salvia, Tucker, and Ysseldyke, 1981). Students from low income or minority backgrounds tend to score lower than white, middle class children on culture-fair tests (Bailey and Harbin, 1981; Costello and Dickie, 1970). Darlington (1973) emphasized that it may not be possible to develop a test instrument that is equally applicable to all cultures. He asserted that the search for an objective definition of a culture-fair test must be replaced by a subjective judgment of the degree of validity the diagnostician is willing to sacrifice in order to select more or fewer members of specific cultural groups.

The use of pluralistic norms has become quite popular in recent years. Mercer and Lewis (1978), for example, developed the System of Multicultural Pluralistic Assessment (SOMPA) which uses pluralistic norms for interpreting scores on existing tests. A major weakness of this approach is that it does not account for the extremely heterogeneous nature of any one cultural group (Duffey, Salvia, Tucker, and Ysseldyke, 1981). Not all members of a particular racial or ethnic group have the same experience background or values.

Therefore, cultural stereotypes should be avoided in assessment.

The importance of using standardized tests for description and prescription rather than selection and prediction was stressed by DeBlassie (1980). Standardized tests can be used to predict the success of culturally different groups of children, but leave much to be desired when it comes to predicting the success of an individual student. DeBlassie argued that standardized tests must have predictive validity coefficients of .90 or above if they are to be reasonably effective predictors of behaviors of individual students. Since most tests that are considered "well-constructed" have predictive validity coefficients ranging from .60 to .85, they are inadequate for predicting an individual student's behavior.

Even though standardized tests are limited in terms of their predictive value for individual students, DeBlassie maintained that they can be used constructively in planning instructional programs. Standardized tests provide the examiner with an indication of the child's current level of functioning, strengths and weaknesses, etc. Test users, however, must acquire the skills and knowledge necessary to use test data in a manner that will benefit the student. In testing Mexican-American youth, he suggested that test data be used in conjunction with nontest data obtained from a variety of sources (e.g., rating scales, observation, interviews, etc.). An effort must be made to understand the total

individual in relationship to his/her environment.

Bias in assessment is not limited to the tests themselves. Bias can begin in the referral process, and test data may be used to reinforce a decision that has already been made (Tucker, 1980). Evidence for this was found by Tucker (1979) in an investigation in which teachers were asked to rate a case study of a child with learning problems in terms of the extent to which they felt that the child needed special education. Teachers judged special education to be more appropriate when a Mexican-American child was described than when an Anglo-American child was described. Research conducted by Mercer (1973), on the other hand, indicated only slight ethnic bias in teacher referrals for special education evaluations. Referred minority students, however, were more often selected for formal testing.

Duffey et al. (1981) stressed that the use of test data is the biasing factor rather than the tests themselves and that educators will need to develop criteria for use in decision-making that can be stated in operational terms. Nonbiased assessment cannot be achieved solely by using current norm referenced tests and classification systems. It is the responsibility of the examiner to judge the extent to which the student is similar to those on whom the test was standardized. These authors suggested that progress in achieving nonbiased assessment can be attained by using criterion referenced tests and classification systems based specifically on educational criteria.

Bailey and Harbin (1980) asserted that bias is a problem permeating the entire decision making process. Bias can occur in (1) referral, (2) testing, (3) interpretation of results, (4) determination of eligibility, (5) recommendation for placement, and (6) actual placement. Conditions that must be met to eliminate bias in decision making include the following:

1. The evaluation must be conducted by an interdisciplinary team consisting of professionals who can use tests in a nondiscriminatory manner.
2. The evaluation process must focus on the specific skills necessary for success in the school environment.
3. The evaluation process must ensure that the student's performance is evaluated within the total context of the environments in which he/she functions.

Chinn (1980) expressed the viewpoint that the evaluator rather than the test is the crucial variable in conducting an appropriate assessment. The examiner's professional judgment is of vital importance in the assessment process when culturally diverse children are tested. Thus, it is the examiner's responsibility to evaluate the appropriateness of the tests used to assess the student's performance.

In developing assessment strategies for use with bilingual handicapped students, current needs must be identified and solution strategies must be developed to meet those needs. Plata and Santos (1981) listed the following questions as important to consider in conducting assessments

with bilingual handicapped students:

1. Who will assess linguistically different students suspected of having a handicapping condition?
2. What instruments will be used to ascertain the "true" performance levels of these students?
3. What procedures will be used to ensure that the assessment is nondiscriminatory?
4. What competencies must appraisal personnel have to successfully assess bilingual handicapped pupils?
5. What alternative procedures will be established to successfully assess bilingual handicapped pupils?
6. Where and how will appraisal personnel be trained?
7. Who will train appraisal personnel? (p. 99)

Plata and Santos suggested that program models used in developing instructional programs for Spanish-speaking students will vary according to factors such as the availability of qualified personnel, the number of handicapped students, etc. Thus, school districts will have to develop solution strategies relevant to their own unique circumstances. Plata and Santos failed to provide recommendations for using test instruments and personnel in the special education assessment of bilingual student populations. Guidelines are needed that can be used in developing strategies for conducting assessments with bilingual students.

There is a need for research designed to study methods currently being used in school systems to conduct nondiscriminatory evaluations with Spanish-speaking students. Doukas (in press) has suggested that researchers need to concern themselves with issues relating to how the resources

of the educational system can be used to meet the needs of bilingual students with learning problems. Both the tests used and the human resources involved in assessment need to be considered.

Survey research can provide needed information regarding the assessment practices used with Hispanic student populations. Previous survey research has provided evidence that tests commonly in use with Spanish-speaking students were not designed for this student population. Morris (1976) conducted a survey of pupil personnel directors in 16 school districts to determine what tests were being used to evaluate intellectual potential, achievement, and personality of Spanish-speaking students. Pupil personnel directors from 12 of the 16 school districts responded to the questionnaire. Questionnaires were returned from the following states: Arizona, California, Colorado, Florida, Illinois, Nevada, and Texas.

The five standardized tests most commonly used with Spanish-speaking children were found to be the Bender-Gestalt, Draw-A-Person, Leiter International Performance Scale, Wechsler Intelligence Scale for Children (English version) and the Wide Range Achievement Test. No mention is made of a Hispanic population in the standardization sample for four of these five tests. Puerto Rican and Chicano children were included in the normative group for the Wechsler Intelligence Scale for Children, but the test manual does not provide any information relating to the com-

parative performance of Hispanic children on the test.

Based on the findings of this study, Morris made the following recommendations:

1. The establishment of job roles for bilingual counselors and school psychologists who have had extensive experience with bilingual children.
2. A deemphasis on the use of nonprofessional interpreters since the examiner is unable to verify the accuracy of the translations.
3. Development of local norms for tests used with non-English speaking populations so that a child's performance can be compared with that of peers.
4. Use of parent interviews in the evaluation process along with observations of the child's social and adaptive behavior.
5. The use of language dominance tests when the examiner is unsure whether English or Spanish is the child's dominant language.
6. The avoidance of tests that require substantial English language proficiency when Spanish-speaking children are being tested.
7. Retesting of Spanish-speaking children who have been placed in special programs based on tests administered in English.

The conclusions that can be drawn from Morris' research are limited because of the small number of school districts surveyed in the study. Moreover, the survey was completed

by pupil personnel directors rather than practitioners (e.g., school psychologists). Since pupil personnel directors are not directly involved in the administration of tests, they might not always know what tests are actually being used. Thus, the results might have been quite different if individuals directly involved in administering tests had completed the survey. No data were obtained in Morris' study relating to the tests used by school districts in the evaluation of Spanish-speaking children for speech and language therapy programs.

Pickering (1976) asserted that the speech-language pathologist has an important role and responsibility in providing services to bilingual students but that diagnostic and instructional materials are badly needed. Survey research would make it possible to identify some of the problems experienced by speech-language pathologists in their efforts to identify communicatively handicapped Spanish-speaking students.

Oral Language Assessment of the Spanish-Speaking Child

Research has provided evidence that differences in performance between bilingual speakers and monolingual English speakers are greatest on verbal measures. Sabatino, Hayden, and Kelling (1972) administered perceptual, language, and academic achievement tests to English, Spanish, and Navajo speaking children. Test variables that were found to discriminate most among the three groups involved knowledge of

the linguistic rules of English. Based on this finding, Sabatino et al. suggested that assessments be conducted in the language and dialect used by the child most frequently.

When testing Spanish-speaking students, the possibility that the child has a speech or language handicap in the dominant language must be considered. Speech and language deficits are frequently observed in children with learning problems (Wallace and McLoughlin, 1979). Since a handicap in oral communication skills may be a contributing factor to a child's learning problems, it is important to evaluate one's level of proficiency in the spoken language.

The following "symptoms" of communication handicaps in Hispanic student populations were presented by Condon et al. (1979):

1. The student shows signs of confusion and frequently refuses to answer questions.
2. The student demonstrates difficulty with speech sound production.
3. Errors made in one language are frequently repeated in the other language.
4. Expressive language problems are demonstrated in both English and Spanish.
5. The student demonstrates difficulty following directions in both English and Spanish.
6. The student may exhibit behavior in the classroom that is disruptive because of his/her inability to understand the expectations of the classroom teacher.

A child is considered to be communicatively handicapped only if the problem is evident in the dominant language. The serious effect that a speech or language handicap can have on a child's academic performance was described by Condon et al. as follows:

For those students who suffer from speech or communication handicaps in their own native language, the mandate of conquering these difficulties in addition to learning a foreign idiom may be so overwhelming that it may lead to other disorders or simply result in a cessation of learning. Under the circumstances, the remediation of linguistically related exceptionalities is a complex matter not to be undertaken lightly, nor is it one to be left in the hands of any single specialist. (pp. 178-179)

Bilingual children with language handicaps are more likely to demonstrate difficulties acquiring English as a second language than their nonhandicapped peers. In a study conducted by Wyszewianski-Langdon (1977), it was found that bilingual children who were judged by their teachers to be "disordered" in their acquisition of English as a second language tended to show evidence of communication problems in both English and Spanish during formal testing. The fact that a child is slower than his/her peers in the acquisition of English as a second language, however, does not necessarily mean that a language handicap is present. Thus, testing in the child's dominant language is necessary.

Obtaining a valid measure of a bilingual child's oral language proficiency is a complex task in both the native language and in English. The problems encountered in measuring the bilingual child's level of oral language profi-

ciency in English were illustrated in a study conducted by Hickey (1972). In this study, the Peabody Picture Vocabulary Test was administered to two groups of preschool children, each consisting of 100 subjects. Students in one group were monolingual (English) while students in the other group were bilingual (Spanish-English). An item analysis revealed that the bilingual students demonstrated significantly more errors on verbal nouns (words ending in -ing, such as "hitting," "ringing," etc.)

In the second phase of this study, a modified version of the test was administered in which verbal nouns were eliminated. No significant differences were found between the monolingual and bilingual groups. Differences in the structure of the English and Spanish languages may have accounted for these differences. In the Spanish language verbal nouns are invariably used with modifying words or phrases only. Bilingual children may have had difficulty responding to the verbal nouns because these words had no meaning to them out of context. Hickey concluded that these constructions were "sufficiently different between the two languages from a structural point of view to cause significant confusion for the child."

Hickey argued that one must question the validity of scores obtained when the Peabody Picture Vocabulary Test is used with bilingual students because of structural interferences between languages. He expressed surprise that there have been so few attempts to modify the content of the Pea-

body to make it more useful with children from different ethnic backgrounds.

As a result of recent federal legislation in bilingual education and in special education, educators have become aware of the need to evaluate children in their native language or primary mode of communication. In what Erickson (1981) referred to as a "panic approach," a variety of language assessment instruments were translated from English into other languages. Moreover, haphazardly developed non-English and bilingual language assessment instruments were published that generally had a weak theoretical base and often failed to include data on reliability and validity.

Omark (1981a) reported that language tests designed for use with bilingual students have generally been normed on relatively localized homogeneous populations. Such tests are valid to the extent to which the hypothetical "typical" child in the normative population resembles children in the particular setting in which the test is used. Tests used in the assessment of bilingual children must reflect the linguistic characteristics of the child's language environment if they are to provide useful diagnostic information.

It should not be assumed that all bilingual Spanish-speaking students form a homogeneous population. Central Texans, Mexican-Americans, Miami Cuban-American Americans and New York Puerto Ricans, for example, each possess very different cultural, linguistic, and socioeconomic characteristics. Among the variables that influence the individual's

fluency in both English and Spanish are the duration of contact with the dominant language, classroom instructional language, and contact with the homeland (Laosa, 1975).

The usefulness of Spanish oral language proficiency tests which are translations of tests written in English is limited because of the many regional and subgroup linguistic variations that exist among populations (DeAvila and Havassy, 1974). Moreover, concepts may lose their meaning when translated, and structural distinctions made in one language may not be the same as those in another (Burt and Dulay, 1978; Chinn, 1980).

The problems encountered when translations of English language tests are used were illustrated in a study by Rueda and Perozzi (1977) in which the responses of 20 children on the Screening Test of Spanish Grammar (STSG) were compared to their responses on the Spanish translation of the Test of Auditory Comprehension of Language (TACL). The correlation between 24 syntactical items common to both measures was not significant. Subjects tended to demonstrate considerably greater difficulty on the TACL than on the STSG.

An analysis of test items on the Spanish translation of the TACL revealed that translation difficulties may have affected the performance of the subjects. The word "catching" (e.g., "catching the ball"), for example, was translated "pescando," which means catching but implies "catching fish." The translation for "farmer" on this test was "rancho" without the qualifying article "el." Articles are

important in conveying meaning in Spanish and children may become confused on test items in which the necessary articles are omitted.

Rueda and Perozzi suggested that the nonsignificant correlation between the TACL and the STSG may have been observed because one test is a direct translation from English while the other is derived directly from the Spanish language.

Questions regarding the usefulness of the Spanish translation of the TACL as a diagnostic measure were raised by Day, McCollum, Cieslak, and Erickson (1981). They reported that some of the test items represent only the Mexican form of Spanish, making them inappropriate for individuals from other Spanish-speaking populations. Moreover, the relationship between the test items and developmental information on the Spanish language has not been studied.

Silverman, Noa, and Russell (1976) conducted an extensive evaluation of 14 commonly used tests for assessing the oral language proficiency of bilingual students. Each test was rated as "good," "fair," or "poor" on a variety of measures, using a standard set of evaluation criteria. At least two individuals evaluated each of the tests. When differences of opinion were expressed by the two examiners, an additional evaluator mediated the decision.

The results of the evaluation were that 11 of the 14 language tests reviewed were judged as poor in measurement validity and 12 were judged as poor in technical excellence

(i.e., measures such as test-retest reliability, internal consistency, etc.). The problem was described by Silverman et al. as follows:

Measurement validity and technical excellence are two criterion areas of crucial importance that have tended to be neglected in test development efforts. The aspects of validity and reliability, as evaluated by the criteria under measurement validity and technical excellence, respectively, are critical in creating accurate assessment instruments. If decisions are to be made on the basis of students' test scores, one must know what specifically the test measures and how well it accomplishes its objectives (validity). Likewise, it is important to know how stable and consistent the scores are (reliability). (p. 131)

Many of the tests reviewed by Silverman et al. are widely used in the schools even though their validity and reliability have not been clearly established. Educational decisions regarding the needs of students are likely to be inappropriate if the test instruments used lack validity. Efforts must therefore be made to determine the reliability and validity of oral language proficiency tests currently in use with Spanish-speaking students.

A study was conducted by Silverman and Russell (1977) to investigate how children's performance varied on three commonly used bilingual language measures. The language measures used were the Home Bilingual Usage Estimate, the Language Facility Test, and the Teacher Judgment Questionnaire. The Home Bilingual Usage Estimate and the Teacher Judgment Questionnaire both require that a judgment be made to determine whether the child is English monolingual, English dominant, bilingual, Spanish dominant, or Spanish mono-

lingual. The Language Facility Test is designed to measure how well the child is able to conceptualize and communicate.

A total of 1,799 students in grades one through 12 served as subjects. The relationship between performance on the three measures was found to be low. Silverman and Russell suggested that the concept "language dominance" may need to be more adequately defined since different types of measures seem to yield different results. It is possible, however, that lack of control in the administration and scoring of the instruments may have contributed to the observed differences.

Language performance data on structured tasks and in various settings at school and home were obtained from 99 bilingual elementary school students in a study conducted by Teitelbaum (1977). The three structured tasks measured (1) word-naming ability, (2) sentence repetition, and (3) free speech. Rating scales were used to evaluate comprehension and production in English and Spanish and to evaluate the extent to which each language is used in various settings at school and at home.

The three structured tasks were found to be highly intercorrelated and a relationship was found between performance on these tasks and ratings of the children's language proficiency. The relationship between ratings of language proficiency and the extent to which each language is used in various settings was found to be low. The results of this study suggest that the language used most of-

ten by the child is not necessarily the language that is spoken with greatest proficiency. Teitelbaum concluded that teachers should not rely on a single measure of degree of bilingualism (e.g., a single language test or a single subjective judgment) and that they should develop a comprehensive plan to collect language use and language proficiency data from a number of sources.

Gerken (1978) compared the results of four measures of language dominance in a subject population consisting of 32 Mexican-American children. The measures studied were the James Language Dominance Test, Comprehension of Oral Language Test, Dos Amigos Verbal Language Scales, and tape-recorded samples of each child's conversational speech in English and Spanish. Two evaluators listened to each tape and made a judgment regarding the child's language dominance. Gerken found that there were significant correlations between the language dominance tests, but that agreement between the evaluators' ratings of language samples and test results was low. Thus, the tests studied may not necessarily provide a valid measure of one's ability to use language during natural communication activities. It is also possible, however, that the tape-recorded language samples were not representative of the subjects' linguistic capabilities or that the procedures used in rating these samples were inadequate.

In conducting special education evaluations with Spanish-speaking students, it should not be assumed that the language most often used in the home will, in all cases, be the

dominant language of the child. Evidence that children from Spanish-speaking backgrounds often demonstrate greatest proficiency in English was found in a study conducted by Perez (1980). In this study the Spanish version of the Illinois Test of Psycholinguistic Abilities (ITPA) and an English translation were administered to 28 kindergarten and 26 second-grade children enrolled in a bilingual education program. The Spanish ITPA was standardized on monolingual Spanish-speaking children from Colombia, Chile, Peru, Mexico, and Puerto Rico.

The results of this study were that neither kindergarten students nor second grade students scored higher when tested in Spanish than when tested in English. In the kindergarten group significant differences in favor of the English version were found on two of the auditory-vocal tests. The second-grade sample scored significantly higher in English on four of the five auditory-vocal tests. Perez concluded that the results of this study "throw some doubt on the court decisions that require bilingual Hispanic children to be tested in the language that is predominant in the home" (p. 539).

The assessment of language dominance can be an extremely complex and time-consuming process. Language dominance may be found to vary depending on the specific language parameter (e.g., syntax, semantics, etc.) considered. A child may, for example, demonstrate dominance in the phonological system of the first language and demonstrate dominance in the semantic system of the second language (Burt, Dulay,

and Hernandez-Chavez (1978).

The findings of research on oral language assessment measures used with Spanish-speaking children have important implications for the speech-language pathologist. The value of many of the currently available Spanish oral language assessment instruments must be questioned because of inadequate data on test reliability and validity. Evard and Sabers (1979) suggested three procedures that can be used in efforts to improve the validity of test data obtained from distinct ethnic-racial groups:

1. The development of a new test. Tests can be developed locally to ensure that test content is relevant to the linguistic and cultural background of the students being tested. Test construction, however, is time-consuming and may not be very cost-effective if the test is developed for a small student population.
2. The adaptation of an existing test. An existing test may be adapted so as to be appropriate for children from a specific ethnic-racial group. When such changes are made, however, new norms will need to be obtained.
3. The development of local test norms. Local test norms may be developed for existing tests by administering these tests to a representative sample of students from the local student population.

Evard and Sabers maintained that the development of local test norms is the most cost-effective of the three procedures described above. They pointed out, however, that

the use of local norms can lead to lower expectations for students, the lowering of students' aspirations for success, etc. Moreover, the development of local test norms does not guarantee that the test is valid for that group.

It is possible that speech and language assessment instruments currently in use with Spanish-speaking students are not providing the information needed to accurately identify those students who demonstrate speech and language handicaps. There is a need for research designed to study the extent to which currently available tests are providing speech-language pathologists with meaningful assessment data.

Theoretical Frameworks for Bilingual Language Assessment

Tests used in the oral language assessment of Spanish-speaking students have generally been based on a structuralistic model of language. In such a model, language is viewed as a series of discrete points which, when added up, make the whole. Tests based on a structuralistic model are referred to as discrete point tests. These tests are designed to measure specific language structures (e.g., grammatical forms, knowledge of words, etc.). Discrete point tests focus on testing for errors on specific forms without considering the developmental or functional aspects of the communication process (Erickson, 1981).

A major problem with discrete point tests is that they discriminate against children who speak a dialect different from that in which the test is written. The common vocabu-

lary words tested on language proficiency measures often are affected by regional vocabulary differences. Words such as "hot," "jacket," "banana," etc., for example, vary depending on the locale and the mode of use. If a test is used with a heterogeneous population, a child may be penalized for not having been exposed to the right vocabulary (Burt and Dulay, 1978). Discrete point vocabulary measures are of questionable value with children who speak a language that is really a mixture of English and Spanish words. Mixed English and Spanish is often referred to as "pocho," "pidgeon," or "Tex-Mex" (DeAvila, 1976).

Tests based on "standard speech" cannot provide the information necessary to make an intelligent judgment regarding the level of linguistic maturity for children who do not speak the standard dialect. Children can "know" the grammar of their dialect even though their speech is characterized by differences from the standard dialect (Randle, 1975). It is important that an evaluation be made to assess children's development toward the "normal standard" for speaking in their own dialect (Matluck and Mace, 1973).

The structuralistic model of language has received much criticism in recent years because of its failure to recognize the functional aspects of language usage. Oller (1973) asserted that language competence cannot be adequately assessed using test instruments that measure specific structural aspects of the language in isolation. The limitations

of discrete point tests were described as follows:

The discrete point test is a reflection of the notion from teaching that if you get across 50000 (or some other magic number) structural items, you will have taught the language. The trouble with this is that 50000 structural patterns isolated from the meaningful contexts of communication do not constitute language competence; nor does a sampling of those 50000 discrete points of grammar constitute an adequate test of language competence. The question of language testing is not so much whether the student knows such-and-such pattern in a manipulative or abstract sense, but rather, whether he can use it effectively in communication. (p. 198)

A pragmatic linguistic framework for assessment makes it possible to study the child's actual usage of language in context. Within the field of linguistics, pragmatics refers to the study of language use during the actual speaking act. Pragmatic techniques for language assessment involve the analysis of the child's communicative abilities in context (Omark, 1981b).

Discrete point tests do not make it possible to consider the effect of various contexts on the child's communicative performance. The setting, topic, and participants in natural conversation are all factors that may influence one's linguistic behavior. Thus, it is important to consider these factors in the evaluation process (Walters, 1981).

Holloman (1976) suggested that in bilingual assessment it is important to start not with the languages but with the contexts in which the languages are spoken. That is, the use of language for communication purposes in particular social environments must be studied. He argued that we

are not yet able to characterize language knowledge with sufficient precision to guarantee the validity of items on tests.

Omark (1981b) emphasized that children must be evaluated in their natural environment if their natural language capabilities are to be identified. A major problem with objective tests is that the test items may bear little resemblance to anything the children have experienced within their culture. If language is to be adequately assessed, children's communicative behavior must be observed as they function within their experiential world. Children should not be labeled language deficient until the examiner has maximized their opportunities to demonstrate communicative competence.

The pragmatic linguistic approach to assessment described by Omark focuses on the communication act rather than on mastery of specific structural units of the language. In this approach children are observed as they interact with parents, peers, etc. in their environment. When pragmatic assessment techniques are used, it is possible to analyze the exchange of information that is occurring during the speaking act and to evaluate children's effectiveness in communicating with others.

The assessment of children's communicative behavior during actual speaking acts makes it possible to identify specific problems that are being experienced in the real world. In the approach to assessment suggested by Omark,

the child's ongoing attempts to communicate can be compared with the capabilities of peers "rather than with some set of hypothetical others who, in fact, bear little relationship to the child being observed" (p. 281).

Omark emphasized the importance of obtaining language samples in a variety of natural settings. Communication involves speaking acts that serve specific functions (e.g., to request information, to provide information, to warn, etc.) and the analysis of these acts makes it possible to determine if the child can communicate in a way that will cause an appropriate action or reaction in the listener.

Erickson (1981) asserted that any assessment of communication of the bilingual child should reflect the nature of the communicative process in the natural environment if it is to be meaningful. The primary focus of the assessment should be on language function. Information on form should then be used in a supportive manner.

The use of samples of the child's natural communication makes it possible to analyze both form and function. Systematic methods have been developed for the analysis of the Spanish-speaking child's syntax during conversational speech. The Developmental Assessment of Spanish Grammar (DASG) was developed by Toronto (1976) to provide a method for analyzing major grammatical structures as they occur in the spontaneous speech of children. Normative data were obtained using samples of Mexican-American and Puerto Rican children from public schools in Chicago. Assessment forms

that can be used in the analysis of communication function, conversational styles, etc. have also been described in the literature (Erickson, 1981; Omark, 1981b).

Although the importance of assessing functional language competence is well recognized, standardized tests used with bilingual student populations are almost exclusively based on a discrete point approach (Leeman, 1981). Since these tests discriminate against children who speak a dialect different from that of the group on whom the norms were developed, speech-language pathologists need to be extremely careful in selecting these measures for use in assessment. Samples of conversational language, on the other hand, reflect children's natural language behavior and make it possible to compare their communicative abilities to those of others who speak the same dialect.

The structuralistic model of language on which discrete point tests are based provides a very limited picture of the communication process. An individual's linguistic performance on a highly structured task may be very different from his/her performance during natural speaking activities (Mattes, 1976; Prutting, Gallagher, and Mulac, 1975). The information gained from tests based on a structuralistic model tells one nothing about how the child uses language for specific purposes. Such an analysis, however, is possible when conversational language samples are obtained.

The analysis of language samples is one of the most revealing procedures available for the evaluation of children's

productive language (Miller, 1981). Although conversational language samples are frequently used in the analysis of English-speaking children's oral language abilities, it is probable that few individuals working in public school settings have the background in Spanish and the training needed to analyze the conversational language abilities of Spanish-speaking children. The extent to which conversational language samples are being used in speech and language therapy programs to identify communicatively handicapped Spanish-speaking children has not been reported in the literature.

The Responsibilities of Speech-Language Pathologists
in Assessing Spanish-Speaking Children

The important role that speech-language pathologists have in providing services to non- and limited-English-speaking children was described by Pickering (1976):

The speech pathologist has a role and responsibility in providing services and research. Diagnostic and instructional materials in native languages are urgently required. Better understanding must be achieved of the varying learning styles of individuals from specific cultures. Advocacy is needed in behalf of the non- or limited-English speaker, particularly for those whose ethnic groups are less well organized. The speech pathologist must define his place in this important educational movement with strength and creativity.
(p. 279)

Pickering argued that speech-language pathologists must push for the development of materials that can be used to meet the instructional needs of bilingual/bicultural children. The speech-language pathologist must also develop an understanding of their community, history and way of life (Mecham, 1975).

If a child is to be assessed in Spanish, an examiner must be available who can speak Spanish fluently enough to conduct the evaluation. Even in situations where the examiner is a native speaker of Spanish, his/her dialect may be very different from that of the child. Mowder (1979) reported that a New York Puerto Rican examiner "may have no further understanding of a Mexican-American child's language than has a monolingual English examiner" (p. 47). It is important that the examiner has a familiarity with the dialect, regional, and cultural background of the student when language evaluations are conducted.

When minority group children are tested by white examiners in a controlled rather than naturalistic setting, the language behavior observed may not be representative of their true capabilities. Bronstein (1973) described the problem as follows:

A black, Navajo, or Chicano child before an adult white interviewing listener may demonstrate what may seem like extremely limited vocabulary, hesitations, uncoordinated, or unstructured physical motion, a sense of disinterest and unease, which upon dismissal from that setting and return to another social situation of familiarity and one of less personal threat produces a very different complex of social and language interactions. (p. 694)

In a study conducted by Mycude (1968), Mexican-American children were found to demonstrate superior language performance when tested by a Mexican-American examiner than when tested by an Anglo-American. Since only one Mexican-American examiner and one Anglo-American examiner participated in this study, however, it is possible that personal

characteristics of the examiners, independent of ethnicity, influenced the results.

Glass (1979) argued that it is the speech-language pathologist's responsibility to learn as much as possible about the cultural background of the bilingual child, but that comprehensive learning of his/her native language may be an unrealistic expectation. Violation of recent legislation is possible when speech-language pathologists attempt to provide services in the child's native tongue with little knowledge of that language. An effort should be made to obtain the assistance of a bilingual speech-language pathologist whenever possible. When the services of a bilingual speech-language pathologist cannot be obtained, Glass recommended that a bilingual paraprofessional be used. Paraprofessionals, according to Glass, can serve a valuable function in helping to make the diagnosis of the child's language abilities and in conducting therapy.

Glass recommended that a multidisciplinary team approach be utilized in the assessment of bilingual children. The team should consist of a speech-language pathologist, social worker, audiologist, pediatrician, classroom teacher, and an aide or relative who speaks the child's languages. A comprehensive profile of the child's needs, abilities, etc. can then be developed based on information obtained from members of the multidisciplinary team.

Since there is a shortage of personnel who have the skills necessary to assess children from backgrounds where

languages other than English are spoken, Glass suggested that an international registry and language bank be established. The speech-language pathologist could then provide the language bank with audiotapes or videotapes of the child's performance, a detailed case report, and other relevant information. The information submitted would then be analyzed by a group of speech-language pathologists who are fluent in the language spoken by the child.

For an international registry and language bank to be successful in analyzing a child's language behavior, the speech-language pathologists involved in reviewing the data must be familiar with the child's dialect. Glass failed to describe the problems that might arise when children's oral communication is analyzed by speech-language pathologists who are unfamiliar with the dialect that these individuals speak in their home environment.

The need for input from a variety of specialists in assessing the oral communication of Spanish-speaking students was stressed by Condon et al. (1979). They recommended that all data collected on a Spanish-speaking child with a possible communication handicap should be reviewed by a multidisciplinary team including a bilingual speech-language pathologist, bilingual teacher, learning disability consultant, and others. Such an approach will make it possible to ensure the proper identification of the child's problem. The team approach facilitates integration of the linguistic, cultural, therapeutic, and educational aspects

of assessment in developing and implementing a remedial program.

The extent to which bilingual classroom teachers, bilingual teacher aides, etc. are participating in the evaluation of Spanish-speaking children with possible speech and/or language handicaps has not been reported in the literature. It is possible that bilingual paraprofessionals are being assigned the task of administering tests in Spanish because of the current shortage of bilingual speech-language pathologists. Although these individuals can be helpful in the role of "examiner," they are not credentialed speech-language pathologists and may, in many cases, lack the knowledge of language development necessary to interpret the test findings.

In an interview published in the September, 1981 issue of Asha, Manuela Juarez reported that there are currently no published guidelines for determining when a bilingual person has a true speech and language disorder. She also emphasized that "there is no research at all about language-impaired bilingual individuals because there are no people to carry it out" (p. 637).

The literature and research reviewed in this chapter reveal that there continues to be a wide range of problems concerning the identification of Spanish-speaking children with speech and language handicaps. Information is needed regarding the materials, methods, and personnel used in the identification of Spanish-speaking children with speech

and language handicaps so that these problems can be dealt with more adequately.

There is a need for research relating to the assessment practices used in speech and language therapy programs to test Spanish-speaking student populations. Research of this nature can provide information that will be useful in the development of nondiscriminatory approaches to the assessment of Spanish-speaking students.

The current study was designed to obtain information regarding methods, materials, and personnel used by speech-language pathologists in the assessment of Spanish-speaking students. This information was then used in conjunction with the literature review to develop the assessment guidelines that appear in Chapter 5 of this dissertation.

CHAPTER III

PROCEDURES FOR DATA COLLECTION AND ANALYSIS

In reviewing the previous literature relating to issues in the assessment of bilingual student populations, the researcher was unable to locate any studies that involved an analysis of procedures used by practicing speech-language pathologists in identifying Spanish-speaking children with speech and language handicaps. Survey research methods were used in the current study to obtain information regarding the procedures used in speech and language therapy programs to test Spanish-speaking students. Information was also obtained regarding the extent to which practicing speech-language pathologists were qualified for roles in the assessment of these children. The survey findings were used in conjunction with information from the literature review to formulate a detailed set of assessment guidelines. These guidelines were designed for use in improving current assessment practices.

The survey instrument used in the current research was distributed to individuals from Los Angeles County who were members of the American Speech-Language-Hearing Association. Survey respondents working in public school speech and language therapy programs were divided into four groups for data analysis purposes based on Hispanic enrollment in the

school population where they conducted speech and language therapy; the chi-square data analysis procedure was used to measure the significance of differences between groups on selected items from the survey.

This chapter includes a detailed description of the procedures employed in developing the survey instrument and in using that instrument to obtain the research data. The areas covered in this chapter are (1) selection of the survey sample; (2) the survey questionnaire; (3) the pilot study; (4) procedures for collection of the dissertation data; and (5) methods of data analysis.

Selection of the Survey Sample

The 1980 membership directory of the American Speech-Language-Hearing Association (ASHA) and the 1981 directory supplement were used to select the survey sample for this research. The survey sample consisted of 408 (31%) of the 1334 ASHA members listed in Los Angeles County. A total of 410 ASHA members in Los Angeles County met the criteria used to select potential respondents for this study; two of these members, however, had to be excluded from participation in the research because address information was missing in the directory listings.

Los Angeles County was chosen as the geographical region for the selection of the survey sample because of the large population of Hispanic students attending school in that area. Moreover, the percentage of Hispanics in Cali-

ifornia who reside in Los Angeles County is increasing. Demographic data reported by Foote, Espinosa, and Garcia (1978) revealed that during 1977-78, approximately 43.7 percent of Hispanic students in California attended public school in Los Angeles County. The researcher learned from a personal contact with the Office of the Los Angeles County Superintendent of Schools in 1982 that this figure has increased to 52%.

Names and addresses for 237 of the individuals asked to complete the questionnaire were obtained from the 1980 ASHA membership directory. The 1981 directory supplement was used to select an additional 171 individuals for participation in this research.

The 1980 ASHA membership directory lists 1161 members from Los Angeles County. In selecting ASHA members for this study, an effort was made to exclude individuals who were not serving as speech-language pathologists in public school speech and language therapy programs. The number of ASHA members selected from the 1980 directory was reduced to 237 individuals by excluding ASHA members in the following categories: (1) members who were not employed in the public schools (e.g., speech-language pathologists working in hospitals, private practice, universities, etc.); (2) members employed in public schools who were not providing direct instructional services to students in speech and language therapy programs (e.g., teachers of full-day special education classrooms, administrators, program specialists,

etc.); (3) members for whom employment information was not listed in the directory (e.g., members who were unemployed).

The 1980 ASHA membership directory does not provide membership information for individuals who joined ASHA after July, 1979. The 1981 supplement to the ASHA membership directory, however, made it possible to obtain the addresses of members in Los Angeles County who joined ASHA between July, 1979 and August, 1980, along with the addresses of members who moved into Los Angeles County during this period. Address information is listed in the directory supplement for 171 of these 173 individuals. The directory supplement, however, does not provide employment information for the members listed. Therefore, the survey was sent to all 171 of these ASHA members. Based on the employment information reported when the surveys were returned, it was possible to identify those employed in public school speech and language therapy programs.

In developing guidelines for the identification of Spanish-speaking children with speech and language handicaps, it is important that input be obtained from highly competent professionals in the field. By selecting the survey sample from the 1980 ASHA directory and the 1981 directory supplement, it was possible to study the assessment procedures used by a group of the most highly qualified speech-language pathologists working in public school settings. Speech-language pathologists must hold a Master's degree or its equivalent to qualify for membership

in ASHA. In the American Speech-Language-Hearing Association Annual Report (1981), it was reported that 87.2% of ASHA members hold the Certificate of Clinical Competence (CCC). This Certificate is awarded to ASHA members who have demonstrated extensive academic and clinical preparation, completion of a Clinical Fellowship Year (CFY), and satisfactory performance on the National Examination in Speech-Language Pathology/Audiology.

A total of 285 (69.85%) of the 408 individuals who were mailed questionnaires returned the survey instrument. A detailed description of the responding sample is presented in Chapter IV.

The Survey Questionnaire

The 27-item questionnaire that was used in this research appears in Appendix A. The questionnaire consisted of "yes-no" questions, multiple-choice questions, and short answer questions. The final item on the survey was open-ended and provided an opportunity for the respondent to make comments and suggestions regarding procedures used in conducting speech and language evaluations with Spanish-speaking students.

The questionnaire items were designed so that information could be obtained regarding the tests, personnel, and methods used in the assessment of the Spanish-speaking child's speech and language behavior. Moreover, respondents were asked to supply specific information regarding

their personal and professional backgrounds, the extent to which they were trained to conduct speech and language evaluations with Spanish-speaking students, etc.

The Pilot Study

A pilot study was carried out prior to the dissertation research for the following reasons:

1. To determine the communication effectiveness of items selected for the survey instrument so that necessary refinements could be made prior to the dissertation research.
2. To identify problems that might arise in distributing the survey instrument or in the collection of data.

In March, 1981 a list of survey questions designed for use in this study was submitted to professional educators and doctoral students for review. Speech-language pathologists, school psychologists, and two authors of books relating to nondiscriminatory evaluation and communication assessment of the bilingual child were among those participating in various aspects of the review process. Their feedback regarding the format, content, and organization of the questions was used to develop the questionnaire for the pilot study.

In the initial portion of the pilot research, conducted in May, 1981, 39 speech-language pathologists representing Arizona, California, Colorado, Florida, New Mexico, New York, Oregon, Texas, and Washington were asked

to complete the survey. Names and addresses were obtained from the 1980 directory of the American Speech-Language-Hearing Association. The individuals who were mailed surveys were all informed that their responses would serve as pilot data for a doctoral dissertation. In addition to having the respondents complete the questionnaire, they were asked to provide suggestions for improving the survey instrument.

A total of 21 (54%) of the 39 individuals surveyed returned the questionnaire. Comments made by several respondents indicated that they had misinterpreted particular questions on the questionnaire. Appropriate modifications were made as a result, to make these survey questions more understandable.

Pilot testing of the modified version of the questionnaire was conducted in June, 1981. Forty speech-language pathologists representing nine states were asked to complete the survey. The instrument was returned by 21 (53%) of the individuals surveyed. Inadequacies in published Spanish oral language tests and a lack of bilingual personnel to conduct the testing were among the problems expressed. Only 5% of the respondents indicated that their previous coursework in speech and language pathology included subject matter relating to specific test instruments designed for use in evaluating the speech and language skills of Spanish-speaking students. Moreover, only 52% indicated that they would be able to

ensure that assessment instruments are administered in Spanish when children who speak Spanish as their dominant language are referred for evaluations.

The conclusions that can be drawn from the pilot research are limited because of the small number of surveys that were analyzed. The results, however, did indicate that problems were being experienced by speech-language pathologists in the assessment of Spanish-speaking students. Thus, there is a definite need for research on assessment practices that will lead to improved procedures for conducting speech and language evaluations with Spanish-speaking students. The current study was designed to fulfill this need.

The survey instrument that was used in the dissertation research included 16 of the questions that were used in the pilot study and 11 questions that were added following completion of that study. Minor modifications were made in the phraseology of questions selected from the pilot study based on input from the survey respondents. Additional refinements were made in these questions based on suggestions from professional educators following completion of the pilot research. The 11 questions that were added to the survey following the pilot study were reviewed by practicing speech-language pathologists and professional educators prior to their inclusion in the instrument.

Procedures for Collection of Dissertation Data

A copy of the survey and a self-addressed stamped envelope were mailed in December, 1981 to the 408 individuals selected for participation in this study. A cover letter described the purpose of the study and requested that the survey be returned anonymously within ten days. The cover letter appears in Appendix B.

Each copy of the survey was assigned a code number so that the names of individuals who failed to complete the survey could be identified. Twenty-six days following the initial mailing of the instrument, a follow-up letter and a duplicate questionnaire were sent to the individuals who had failed to respond. The follow-up letter is presented in Appendix C.

The majority of the questions on the questionnaire were applicable only to speech-language pathologists involved in conducting speech and language therapy in public school settings. Respondents indicated their current employment on Question 4 of the survey. Those individuals who listed employment in settings other than public school speech and language therapy programs were asked to respond only to the first nine questions on the survey (i.e., questions relating to ethnic background, professional experience, fluency in Spanish, etc.). Their data were analyzed independently of the data obtained from speech-language pathologists working in public school speech and

language therapy programs.

All survey respondents involved in conducting speech and language therapy in the public schools were asked to complete Questions 1 through 16 and Question 27. Questions 17 through 26 related specifically to procedures used in conducting speech and language evaluations in Spanish. Therefore, these questions were completed only by speech-language pathologists working in schools where speech and language testing had been conducted in Spanish.

Methods of Data Analysis

Survey respondents who were employed as speech-language pathologists in public school speech and language therapy programs were divided into four groups for data analysis purposes based on the percentage of students in their school population who were Hispanic:

<u>Group</u>	<u>Description</u>
1. Very Low Hispanic Enrollment Group	Less than 10 percent Hispanic enrollment.
2. Low Hispanic Enrollment Group	Between 10 percent and 25 percent Hispanic enrollment.
3. Moderate Hispanic Enrollment Group	Between 26 percent and 40 percent Hispanic enrollment.
4. High Hispanic Enrollment Group	More than 40 percent Hispanic enrollment.

The placement of respondents into the four groups was based on information obtained from Question 10 of the survey. This survey item asked speech-language pathologists

to estimate the percentage of Hispanic students in the school population where they conducted speech and language therapy. Speech-language pathologists who served more than one school were asked to report the percentage of Hispanic enrollment at the school where Hispanic enrollment was highest.

By dividing the survey respondents into the four groups, it was possible to determine how assessment practices varied depending on the percentage of students who were Hispanic in the school population. The chi-square statistical analysis procedure was used to measure the significance of differences between groups. The .05 level was used as the criterion for determining whether or not the observed differences were significant.

The data obtained from the survey were treated by performing an analysis of each individual survey item. Numbers obtained from the quantitative analysis of data were converted to percent values. The tables in Chapter IV present these data for each of the groups studied.

Four of the "yes-no" questions on the survey required individuals who responded "NO" to specify the reason for their response. The respondents' comments on these questions were coded into specific response categories; the number of responses within each category was computed.

Information regarding the test instruments used with Spanish-speaking students was obtained from Questions 15, 24, and 26 of the survey. Frequency data was computed for

each of the tests listed by respondents on Questions 15 and 24. Informal assessment procedures listed by respondents on Question 26 were coded into specific response categories and quantified.

Questions 20 and 21 on the survey were multiple-choice items in which the individuals completing the survey were asked to mark the titles of personnel who had been involved in administering tests in Spanish to Spanish-speaking children. Space was provided beside the multiple-choice category "Other" so that respondents could write in the titles of assessment personnel who were not specifically listed. The specific responses produced were categorized and quantified.

The analysis of data obtained from Question 27 was primarily descriptive rather than quantitative in nature because of the open-ended format of this survey item. Question 27 provided an opportunity for respondents to make comments and suggestions regarding procedures used in conducting speech and language evaluations with Spanish-speaking students. These comments and suggestions are described in detail in the following chapter and individual variations among respondents are reported.

CHAPTER IV

ANALYSIS OF THE SURVEY DATA

The data analyzed in this research were obtained from a survey instrument (see Appendix A) distributed to 408 individuals in Los Angeles County who were members of the American Speech-Language-Hearing Association. The survey examined issues relating to the assessment instruments and personnel used in conducting speech and language evaluations with Spanish-speaking students. The first three sections of this chapter cover the analysis of survey data regarding (1) the personal and professional background of survey respondents, (2) the procedures used in conducting evaluations with Spanish-speaking students, and (3) the extent to which practicing speech-language pathologists demonstrated the training and fluency necessary to test children who speak Spanish. Section four presents the analysis of general comments made by survey respondents that were relevant to the assessment of Spanish-speaking students.

Personal and Professional Background of Survey Respondents

A total of 285 of the 408 surveys mailed were returned. This represents a return rate of 69.85%. Forty-two of the returned surveys were excluded from data analysis because

the respondents failed to provide information regarding Hispanic enrollment in the school population served; this information was needed to group the data for analysis purposes. Consequently, the data presented herein reflect 241 useable replies to the survey or 59.07% of the original sampled population.

Professional Employment of Survey Respondents

The data obtained from Question 4 of the survey provided information regarding the employment of the survey respondents. These data are presented in Table 1. As shown in this table, 146 (60.58%) of the respondents were working in public school speech and language therapy programs that included students from regular education classrooms. An additional eight (3.32%) of the survey respondents worked in public school speech and language therapy programs that were limited to children from special education classrooms. Thus, there were a total of 154 respondents working in public school speech and language therapy programs.

Forty-one (17.01%) of the 241 survey respondents indicated that they were working as teachers of full-day special education classrooms (e.g., classrooms for children with severe disorders of language).

The employment category "Other," selected by 46 (19.09%) of the respondents, included the following:

1. Nine respondents employed by the public schools who were

TABLE 1. Number and percentage of survey respondents employed in public school speech and language therapy programs, full-day special education classrooms, and other settings.

Employment Setting	Number	Percent
Speech-language pathologists in public school speech and language therapy programs. (N=154)		
A. Student caseload included children from regular education classrooms.	146	60.58%
B. Student caseload was limited to children from special education classrooms.	8	3.32%
Teachers of full-day special education classrooms (e.g., classrooms for children with severe disorders of language).	41	17.01%
Respondents in other employment settings.	46	19.09%
Total	241	

not providing direct instruction in a speech and language therapy program or in a full-day special education classroom (i.e., administrators, program specialists, etc.)

2. Five respondents employed as audiologists.
3. Thirty-two respondents working in private practice and/or in employment settings such as hospitals, clinics, etc.

The data analysis presented in this chapter focuses primarily on the responses of the 154 survey respondents who were employed as speech-language pathologists in public school speech and language therapy programs. The public school speech-language pathologists were the only survey respondents asked to respond to Questions 10 through 27 on the survey; these questions related specifically to the testing of Spanish-speaking children in the public schools. All 241 of the survey respondents were asked to respond to questions relating to their training, background, Spanish language fluency, etc. by completing the first nine questions that were listed on the survey instrument.

The data reported in this chapter regarding the survey respondents' ethnic background, years experience as a public school speech-language pathologist, and certification status are presented in the data tables separately for the three employment categories, based on the employment information obtained from Question 4 of the survey. The

three employment categories, as listed in the tables, are "Public school speech and language therapy," "Full-day special education class," and "Other employment setting."

Ethnic Background of Survey Respondents

The ethnic background of survey respondents is reported in Table 2 based on the data obtained from Question 2 of the survey. Anglos accounted for 88.96% of the respondents working in public school speech and language therapy programs and for 90.04% of the total responding sample. The remaining survey respondents listed their ethnic background as Black, Hispanic, Asian, or "Other." Only two (0.83%) of the 241 survey respondents were Hispanic.

Years Experience as a Public School Speech-Language Pathologist

The number of years of experience that survey respondents had completed working as public school speech-language pathologists was determined based on their responses to Question 3 of the survey. None of the survey respondents working in public school speech and language therapy programs or in full-day special education classrooms reported less than one year of experience as a public school speech-language pathologist; a total of 21 (45.65%) of respondents in the employment category "Other" had not worked as a public school speech-language pathologist. Seven or more years as a public school speech-language pathologist was reported by 77 (50.00%) of the 154 respond-

TABLE 2. Ethnic background of the survey sample, as reported by the respondents on Question 2 of the survey. The data are presented by employment category based on the employment information obtained from Question 4 of the survey.

Ethnic Background	Public school speech and lan- guage therapy		Full-day special educa- tion class		Other employment setting		Total	
	#	%	#	%	#	%	#	%
Anglo	137	88.96%	38	92.68%	42	91.30%	217	90.04%
Black	8	5.19%	1	2.44%	0	0.00%	9	3.73%
Hispanic	1	0.65%	1	2.44%	0	0.00%	2	0.83%
American Indian	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Asian	5	3.25%	0	0.00%	1	2.17%	6	2.49%
Other Ethnic Group	3	1.95%	1	2.44%	3	6.52%	7	2.90%
Total	154		41		46		241	

ents employed in public school speech and language therapy programs. The survey data regarding years of experience as a public school speech-language pathologist appear in Table 3.

Certification Status of Survey Respondents

Members of the American Speech-Language-Hearing Association are considered to be "Certified" when they fulfill the academic and clinical training requirements for the Certificate of Clinical Competence (CCC) in Speech-Language Pathology and/or Audiology. Question 5 on the survey required respondents to indicate the area(s) in which ASHA Certification was held. A total of 216 (89.63%) of the 241 survey respondents indicated that they held the Certificate of Clinical Competence only in the area of Speech-Language Pathology while five (2.07%) of the respondents reported that they held this Certificate only in Audiology. Two (0.83%) of the survey respondents reported that they held the Certificate of Clinical Competence in both Speech-Language Pathology and Audiology. Eighteen (7.47%) of the individuals in the survey sample did not hold the Certificate of Clinical Competence in either Speech-Language Pathology or Audiology.

A total of 140 (90.91%) of the 154 survey respondents who were working as speech-language pathologists in public school speech and language therapy programs held the Certificate of Clinical Competence only in the area of

TABLE 3. Years experience as a public school speech-language pathologist, as reported by survey respondents on Question 3 of the survey. The data are presented by employment category based on the employment information obtained from Question 4 of the survey.

Years Experience	Public school speech and lan- guage therapy		Full-day special educa- tion class		Other employment setting		Total	
	#	%	#	%	#	%	#	%
None	0	0.00%	0	0.00%	21	45.65%	21	8.71%
Less than one year	0	0.00%	0	0.00%	1	2.17%	1	0.41%
1-3 years	38	24.68%	10	24.39%	11	23.91%	59	24.48%
4-6 years	39	25.32%	14	34.15%	4	8.70%	57	23.65%
7 or more years	77	50.00%	17	41.46%	9	19.57%	103	42.74%
Total	154		41		46		241	

Speech-Language Pathology; one public school speech-language pathologist held the Certificate of Clinical Competence in both Speech-Language Pathology and Audiology. A detailed summary of the survey data relating to the certification status of respondents in each of the three employment categories is presented in Table 4.

Procedures Used to Assess Spanish-Speaking Students in
Public School Speech and Language Therapy Programs

The results are presented in this section sequentially for the first six research questions listed in Chapter I. These research questions cover issues relating to the availability of speech and language testing in Spanish and also to issues relating to the specific procedures used to conduct speech and language evaluations with Spanish-speaking students. The survey items that provided the data for these research questions were completed by speech-language pathologists working in public school speech and language therapy programs; survey respondents who were not directly involved in conducting speech and language therapy in public school settings (e.g., teachers of full-day special education classrooms) were asked not to respond to these items.

Speech-language pathologists working in public school speech and language therapy programs were divided into four groups for data analysis purposes based on the percentage of Hispanic students in their school population. The number of respondents in each of the four groups is shown in

TABLE 4. Certification status of survey respondents, as reported on Question 5 of the survey. The data are presented by employment category based on the employment information obtained from Question 4 of the survey.

Area of ASHA Certification	Public school speech and lan- guage therapy		Full-day special educa- tion class		Other employment setting		Total	
	#	%	#	%	#	%	#	%
Speech-Language Pathology Only	140	90.91%	37	90.24%	39	84.78%	216	89.63%
Audiology Only	0	0.00%	0	0.00%	5	10.87%	5	2.07%
Both Speech- Language Pathology and Audiology	1	0.65%	1	2.44%	0	0.00%	2	0.83%
Neither Speech- Language Pathology nor Audiology	13	8.44%	3	7.32%	2	4.35%	18	7.47%
Total	154		41		46		241	

Table 5. As shown in this table, the speech-language pathologists were almost equally divided among the four groups. A total of 73 (47.40%) of the 154 speech-language pathologists in public school speech and language therapy programs worked in schools where Hispanics constituted greater than 25% of the total population. Thirty-six (23.38%) of these 154 respondents worked at schools where Hispanics constituted over 40% of the total student enrollment.

The results of the survey are shown for each of the four groups of public school speech-language pathologists in the data tables presented in this chapter. The chi-square statistical analysis procedure was used to determine the significance of differences between groups on selected survey items.

Data for the first three research questions presented in this section were obtained from survey items that were to be completed by all speech-language pathologists working in public school speech and language therapy programs. Thus, all 154 public school speech-language pathologists were expected to respond to survey items relating to Research Questions 1.1, 1.2, and 1.3.

Data for Research Questions 1.4, 1.5, and 1.6 were obtained from survey items that were to be completed only by speech-language pathologists working in public school speech and language therapy programs where evaluations had been conducted in Spanish. A total of 131 individuals responded to these questions. Thus, the data indicated that

TABLE 5. Segmentation of public school speech-language pathologists into four groups for data analysis, based on Hispanic enrollment in the school setting where speech and language therapy was conducted.

Group	Hispanic Student Enrollment in School Population	Size of Group	
		Number	Percent
Very Low Hispanic Enrollment Group	Less than 10% Hispanic student enrollment.	38	24.68%
Low Hispanic Enrollment Group	Between 10% and 25% Hispanic student enrollment.	43	27.92%
Moderate Hispanic Enrollment Group	Between 26% and 40% Hispanic student enrollment.	37	24.02%
High Hispanic Enrollment Group	Over 40% Hispanic student enrollment.	36	23.38%
Total		154	100.00%

there were 131 speech-language pathologists working in public schools where speech and language evaluations had been conducted in Spanish. The survey data for Research Questions 1.4, 1.5, and 1.6 are based on the responses of these 131 individuals.

RESEARCH QUESTION 1.1: To what extent are speech-language pathologists able to ensure that speech and language evaluations are conducted in Spanish when Spanish-dominant children are referred for testing?

Question 13 on the survey provided information regarding the extent to which public school speech-language pathologists could ensure testing of Spanish-dominant children's speech sound articulation in Spanish. Question 14 provided information regarding the extent to which speech-language pathologists could ensure oral language testing in Spanish.

Table 6 presents the data from Question 13 for each of the four groups. A total of 116 (75.32%) of the 154 public school speech-language pathologists indicated that they would be able to ensure articulation testing in Spanish when Spanish-dominant children are referred for evaluations. The percentage of respondents reporting that they would be able to ensure a Spanish articulation assessment was 65.79% for the Very Low Hispanic Enrollment Group, 81.40% for the Low Hispanic Enrollment Group, 78.38% for the Moderate Hispanic Enrollment Group, and 75.00% for the High Hispanic Enrollment Group. None of the differences between groups was found to be significant at the .05

TABLE 6. Number and percentage of public school speech-language pathologists who responded "YES" to the question: "If children who speak Spanish as their dominant language are referred for testing to determine whether or not they have a handicap in speech sound articulation, would you be able to ensure that an evaluation is conducted in Spanish by a Spanish-speaking examiner?"

Responses to Survey Question 13			
Group	Number of Individuals Responding	Number of "YES" Re- sponses	Percent "YES" Responses
Very Low Hispanic Enrollment Group	38	25	65.79%
Low Hispanic Enrollment Group	43	35	81.40%
Moderate Hispanic Enrollment Group	37	29	78.38%
High Hispanic Enrollment Group	36	27	75.00%
Total	154	116	75.32%

level.

Respondents who indicated that they would be unable to ensure articulation testing in Spanish with Spanish-dominant children were asked to specify the reason testing could not be guaranteed. Of the 32 respondents who specified reasons, 29 (90.63%) commented regarding the shortage of qualified personnel to conduct the testing. Specific examiner qualifications reported as lacking were (1) the education, training, and/or experience background necessary to conduct the testing and (2) fluency in the Spanish language.

Three (9.38%) of the 32 respondents who specified reasons that articulation testing could not be ensured in Spanish made comments relating to local school practices in assessment. These comments are summarized below:

1. Articulation testing in Spanish cannot be ensured because the district is inconsistent in responding to special problems.
2. Articulation testing in Spanish can be ensured only for severe cases.
3. Articulation testing cannot be ensured because only language impairments are assessed.

The data presented in Table 7 show the extent to which speech-language pathologists reported that they would be able to ensure that evaluations are conducted in Spanish when Spanish-dominant children are referred for possible oral language handicaps (e.g., handicaps in vocabulary, syntax, etc.). When completing Question 14 of the survey,

TABLE 7. Number and percentage of public school speech-language pathologists who responded "YES" to the question: "If children who speak Spanish as their dominant language are referred for testing to determine whether or not they have a handicap in oral language (e.g., vocabulary, syntax, etc.), would you be able to ensure that an evaluation is conducted in Spanish by a Spanish-speaking examiner?"

Responses to Survey Question 14			
Group	Number of Individuals Responding	Number of "YES" Re- sponses	Percent "YES" Responses
Very Low Hispanic Enrollment Group	38	28	73.68%
Low Hispanic En- rollment Group	43	36	83.72%
Moderate Hispanic Enrollment Group	37	29	78.38%
High Hispanic En- rollment Group	36	28	77.78%
Total	154	121	78.57%

a total of 121 (78.57%) of the 154 public school speech-language pathologists indicated that they would be able to ensure that oral language testing is conducted in Spanish. The percentage of speech-language pathologists reporting that they would be able to ensure a Spanish oral language evaluation ranged from a low of 73.68% to a high of 83.72% for the four groups. The differences between groups, however, were not found to be significant at the .05 level.

Survey respondents who indicated that they would be unable to ensure that Spanish-dominant children's oral language skills are tested in Spanish were asked to specify the reason for their response. Twenty-six (96.30%) of the 27 respondents who specified reasons commented regarding the shortage of qualified assessment personnel. Available assessment personnel were reported to be poorly qualified to conduct assessments as a result of insufficient fluency in Spanish and/or as a result of deficits in their education, training, or experience background.

Only one comment was made on Question 14 that did not relate specifically to the personnel involved in conducting evaluations. This respondent reported that oral language testing could not be ensured in Spanish because the local district was inconsistent in responding to special problems. The specific reason for the district's inconsistency in responding to special problems, however, was not described by the respondent.

RESEARCH QUESTION 1.2: To what extent are articulation and language screening tests being administered in Spanish to identify Spanish-speaking children with possible speech and/or language handicaps?

Question 11 on the survey provided a measure of the extent to which articulation and language screening tests were being administered in Spanish to identify Spanish-speaking children who may require speech and language therapy. The data obtained from this survey item are reported in Table 8. The percentage of respondents reporting the use of Spanish speech and language screening tests ranged from a low of 36.84% for the Very Low Hispanic Enrollment Group to a high of 72.22% for the High Hispanic Enrollment Group. The difference between the High Hispanic Enrollment Group and the Very Low Hispanic Enrollment Group was found to be significant at the .01 level. The Moderate Hispanic Enrollment Group was also found to make significantly greater use of Spanish articulation and language screening tests than the Very Low Hispanic Enrollment Group. This difference proved to be significant at the .05 level. No other significant differences between groups were found.

The differences observed between groups in the use of Spanish articulation and language screening tests may be related to the extent to which speech and language therapy was provided in Spanish. Question 12 on the survey provided information regarding the extent to which speech and language therapy was available in Spanish at the schools served by the survey respondents. The data obtained from

TABLE 8. Number and percentage of public school speech-language pathologists who responded "YES" to the question: "Do any of the schools that you serve administer articulation and language screening tests in Spanish to identify Spanish-speaking children who may require speech and language therapy?"

Responses to Survey Question 11			
Group	Number of Individuals Responding	Number of "YES" Re- sponses	Percent "YES" Responses
Very Low Hispanic Enrollment Group	38	14	36.84%
Low Hispanic En- rollment Group	43	24	55.81%
Moderate Hispanic Enrollment Group	37	23	62.16%
High Hispanic En- rollment Group	36	26	72.22%
Total	154	87	56.49%

this survey item are shown in Table 9. A total of 153 of the 154 speech-language pathologists working in public school speech and language therapy programs responded to this question.

As shown in Table 9, only 26 (16.99%) of the 153 individuals who responded to Question 12 reported that speech and language therapy was available in Spanish at their schools. The percentage of respondents reporting that speech and language therapy was available in Spanish was 7.89% for the Very Low Hispanic Enrollment Group, 11.90% for the Low Hispanic Enrollment Group, 16.22% for the Moderate Hispanic Enrollment Group, and 33.33% for the High Hispanic Enrollment Group. Thus, the availability of speech and language therapy services in Spanish was found to increase as the size of the Hispanic student population increased.

The chi-square analysis revealed that speech and language therapy was being provided in Spanish significantly more frequently at schools served by speech-language pathologists in the High Hispanic Enrollment Group than at schools served by speech-language pathologists in the Low Hispanic Enrollment Group ($p < .05$) or the Very Low Hispanic Enrollment Group ($p < .01$). No other differences between groups proved to be significant.

The greater availability of speech and language therapy in Spanish at schools with large Hispanic enrollments than at schools with small Hispanic enrollments may be a contri-

TABLE 9. Number and percentage of public school speech-language pathologists who responded "YES" to the question: "Are any of the schools that you currently serve able to provide speech and language therapy in Spanish to Spanish-dominant children with speech and/or language handicaps in their native language?"

Responses to Survey Question 12			
Group	Number of Individuals Responding	Number of "YES" Re- sponses	Percent "YES" Responses
Very Low Hispanic Enrollment Group	38	3	7.89%
Low Hispanic En- rollment Group	42	5	11.90%
Moderate Hispanic Enrollment Group	37	6	16.22%
High Hispanic En- rollment Group	36	12	33.33%
Total	153	26	16.99%

buting factor to the greater use of Spanish speech and language screening tests in settings where the Hispanic enrollment was high.

RESEARCH QUESTION 1.3: What published English articulation and language tests are being used to assess Spanish-dominant children's proficiency in the English language?

Question 15 asked respondents to list English articulation and language tests that were used most frequently in assessing Spanish-dominant children. Table 10 shows the extent to which 14 tests listed by the survey respondents were used. Because of the large number of tests listed by respondents on the survey, Table 10 presents only those tests that were reported by three percent or more of the individuals returning the survey. The Del Rio Language Screening Test, a test developed and standardized specifically for use with Hispanic children, was listed more frequently than any other language test. A total of 34 (39.08%) of the 87 respondents who listed tests on Question 15 reported that this test had been used to evaluate the English language skills of Spanish-dominant students. Other assessment instruments that were used by 20% or more of the individuals who listed tests were the Test for Auditory Comprehension of Language, Peabody Picture Vocabulary Test, and the Northwestern Syntax Screening Test. None of these three tests was developed and standardized specifically for use with Hispanic student populations.

The use of English articulation tests with Spanish-

TABLE 10. Number and percentage of public school speech-language pathologists reporting use of specific English articulation and language tests with Spanish-dominant students on Question 15 of the survey.

Name of Test	Number of Respondents Reporting Use of Test (N=87)	Percent ¹
LANGUAGE TESTS:		
Del Rio Language Screening Test	34	39.08%
Test for Auditory Comprehension of Language	25	28.74%
Peabody Picture Vocabulary Test	21	24.14%
Northwestern Syntax Screening Test	18	20.69%
Illinois Test of Psycholinguistic Abilities	13	14.94%
Assessment of Children's Language Comprehension	12	13.79%
Detroit Tests of Learning Aptitude	9	10.34%
Utah Test of Language Development	7	8.05%
Toronto Tests of Receptive Vocabulary	5	5.75%
Dos Amigos Verbal Language Scales	4	4.60%
Boehm Test of Basic Concepts	3	3.45%
Preschool Language Scale	3	3.45%
ARTICULATION TESTS:		
Fisher-Logemann Test of Articulation	12	13.79%
Templin-Darley Tests of Articulation	7	8.05%

¹ Percentages are based on data from the 87 respondents who listed English articulation and/or language tests.

dominant children was reported by only a small proportion of the responding sample. The Fisher-Logemann Test of Articulation, reported by 12 (13.79%) of the 87 test users, was listed more frequently than any other articulation test. The only other articulation test listed in Table 10 is the Templin-Darley. Use of this test, however, was reported by only seven (8.05%) of the 87 individuals who listed English articulation and language tests on Question 15 of the survey.

RESEARCH QUESTION 1.4: What published Spanish articulation and language tests are being used, and to what extent are these tests providing sufficient information to determine whether or not Spanish-dominant children have handicaps?

Question 24 on the survey provided information regarding the use of published Spanish articulation and language tests in the identification of Spanish-dominant children with speech and/or language handicaps. This question also provided information regarding the adequacy of these test instruments as judged by the survey respondents. This survey item was completed by the 131 public school speech-language pathologists who worked at schools where speech and language evaluations had been conducted in Spanish.

Spanish Articulation and Language Tests Used

Question 24 on the survey asked the respondent to give the titles of Spanish articulation and language tests that had been used with Spanish-speaking children during speech and language evaluations. As shown in Table 11, a total of

TABLE 11. Number and percentage of speech-language pathologists in public schools where speech and language evaluations had been conducted in Spanish who responded "YES" to the question: "Do you know the titles of any commercially available Spanish articulation tests and/or Spanish oral language tests that have been used at your schools to determine whether or not Spanish-speaking children have articulation handicaps and/or language handicaps?"

Responses to Survey Question 24			
Group	Number of Individuals Responding	Number of "YES" Re- sponses	Percent "YES" Responses
Very Low Hispanic Enrollment Group	30	22	73.33%
Low Hispanic En- rollment Group	36	28	77.78%
Moderate Hispanic Enrollment Group	31	24	77.42%
High Hispanic En- rollment Group	34	31	91.18%
Total	131	105	80.15%

105 (80.15%) of the 131 respondents were able to give the titles of specific Spanish articulation and/or language tests that had been used in assessment. The percentage of respondents who were familiar with the specific tests used in assessment was highest for the High Hispanic Enrollment Group (91.18%) and lowest for the Very Low Hispanic Enrollment Group (73.33%). The differences between groups, however, were not significant at the .05 level.

Spanish articulation and language tests used to identify Spanish-speaking students with speech and language handicaps are presented in Table 12, based on the data obtained from Question 24 of the survey. Since the researcher was interested in identifying the test instruments used most frequently, the table includes only those tests that were used by three percent or more of the respondents.

Spanish language tests reported by 20% or more of the 105 respondents who listed tests were the Del Rio Language Screening Test, Test for Auditory Comprehension of Language, and the Screening Test of Spanish Grammar. The Del Rio Language Screening Test, the most frequently reported test, was listed by 74 (70.48%) of the 105 respondents who specified the titles of tests used.

Spanish articulation tests used in assessment were the Austin Spanish Articulation Test, Medida Española de Articulacion, and the Southwestern Spanish Articulation Test. The Austin Spanish Articulation Test, listed by 42 (40.00%) of the 105 respondents who specified test titles, was the

TABLE 12. Number and percentage of speech-language pathologists in public schools where speech and language evaluations had been conducted in Spanish who reported use of specific Spanish articulation and language tests with Spanish-speaking students on Question 24 of the survey.

Name of Test	Number of Respondents Reporting Use of Test (N=105)	Percent ¹
LANGUAGE TESTS		
Del Rio Language Screening Test	74	70.48%
Test for Auditory Comprehension of Language	42	40.00%
Screening Test of Spanish Grammar	41	39.05%
Pruebas de Expresion Oral y Percepcion de la Lengua Espanola (PEOPLE)	17	16.19%
Dos Amigos Verbal Language Scales	17	16.19%
Toronto Tests of Receptive Vocabulary	17	16.19%
Ber-Sil Spanish Test	9	8.57%
Assessment of Children's Language Comprehension	8	7.62%
James Language Dominance Test	6	5.71%
Boehm Test of Basic Concepts	4	3.81%
ARTICULATION TESTS:		
Austin Spanish Articulation Test	42	40.00%
Medida Espanola de Articulacion	16	15.24%
Southwestern Spanish Articulation Test	4	3.81%

¹Percentages are based on data from the 105 respondents who listed Spanish articulation and/or language tests on Question 24 of the survey.

most frequently reported Spanish articulation test.

Adequacy of Spanish Articulation
and Language Tests

In completing Question 24 of the survey, respondents were asked to judge the adequacy of each test that they listed by responding "YES," "NO," or "I DON'T KNOW" to the following question: "Has this test generally provided sufficient information to determine whether or not Spanish-dominant children have articulation/language handicaps in Spanish?" The data obtained from this question are presented in Table 13. The total percentage of "YES" responses and the percentage of "YES" responses when "I DON'T KNOW" responses were excluded are both presented in the table. An "I DON'T KNOW" response suggests that the individual did not have sufficient information to evaluate test adequacy. Individuals, for example, might have selected the "I DON'T KNOW" response category for Spanish articulation and language tests administered at their schools that they had not reviewed. Individuals might also have selected the "I DON'T KNOW" response category when they did not have sufficient experience in using a particular test to formulate an opinion regarding test adequacy.

The extent to which Spanish articulation and language tests are adequate can best be judged based on the percentage of "YES" responses when "I DON'T KNOW" responses are eliminated. If test adequacy is to be appropriately measured, information must be obtained from individuals who

TABLE 13. Adequacy of specific Spanish articulation and language tests as measured by the percentage of "YES" responses (Question 24) to the question: "Has this test generally provided sufficient information to determine whether or not Spanish-dominant children have articulation/language handicaps in Spanish?"

Responses of Speech-Language Pathologists on Survey Question 24								
Name of Test	Number of Respondents Listing the Test	Total "YES" Responses		Total "NO" Responses		Total "I DON'T KNOW" Responses		Percent "YES" Responses with "I DON'T KNOW" Responses Excluded
		No.	%	No.	%	No.	%	
LANGUAGE TESTS:								
Pruebas de Expresion Oral y Percepcion de La Lengua Espanola	17	16	94.12%	1	5.88%	0	0.00%	94.12% (16 of 17)
Test for Auditory Comprehension of Language	42	28	66.67%	11	26.19%	3	7.14%	71.79% (28 of 39)
Screening Test of Spanish Grammar	41	21	51.22%	12	29.27%	8	19.51%	63.64% (21 of 33)
Del Rio Language Screening Test	74	39	52.70%	27	36.49%	8	10.80%	59.09% (39 of 66)
Toronto Tests of Receptive Vocabulary	17	8	47.06%	6	35.29%	3	17.65%	57.14% (8 of 14)

TABLE 13--Continued.

Responses of Speech-Language Pathologists on Survey Question 24								
Name of Test	Number of Respondents Listing the Test	Total "YES" Responses		Total "NO" Responses		Total "I DON'T KNOW" Responses		Percent "YES" Responses with "I DON'T KNOW" Responses Excluded
		No.	%	No.	%	No.	%	
Dos Amigos Verbal Language Scales	17	8	47.06%	7	41.18%	2	11.76%	53.33% (8 of 15)
Ber-Sil Spanish Test	9	4	44.44%	4	44.44%	1	11.11%	50.00% (4 of 8)
Boehm Test of Basic Concepts	4	2	50.00%	2	50.00%	0	0.00%	50.00% (2 of 4)
Assessment of Children's Language Comprehension	8	1	12.50%	4	50.00%	3	37.50%	20.00% (1 of 5)
James Language Dominance Test	6	1	16.67%	5	83.33%	0	0.00%	16.67% (1 of 6)
ARTICULATION TESTS								
Medida Espanola de Articulacion	16	14	87.50%	0	0.00%	2	12.50%	100.00% (14 of 14)
Austin Spanish Articulation test	42	36	85.71%	2	4.76%	4	9.52%	94.74% (36 of 38)
Southwestern Spanish Articulation Test	4	3	75.00%	1	25.00%	0	0.00%	75.00% (3 of 4)

are familiar with the content of these tests. The elimination of "I DON'T KNOW" responses makes it possible to evaluate test instruments based on the responses of individuals who were sufficiently familiar with the tests to formulate an opinion regarding their adequacy. The percentages reported below for individual Spanish articulation and language tests were computed based on the total sample of speech-language pathologists who responded either "YES" or "NO" when asked to indicate whether or not these tests provided sufficient information to identify children with handicaps.

With the exception of Pruebas de Expresion Oral y Percepcion de la Lengua Española (PEOPLE), a test that was developed recently in Los Angeles County, all tests listed are commercially available. Use of PEOPLE was reported by 17 respondents on Question 24 of the survey. This test is listed with the commercially available tests in Table 13 because it is expected that this instrument will become available as a commercial product in the near future. The researcher was informed by the Office of the Los Angeles County Superintendent of Schools that PEOPLE will most likely be released commercially sometime in 1982 or 1983.

PEOPLE was judged to be sufficient for the identification of children with language problems by a higher percentage of respondents than any of the commercially available Spanish language tests. A total of 16 (94.12%) of the 17 respondents evaluating the adequacy of PEOPLE indicated

that the test provided sufficient information to identify Spanish-dominant children with language handicaps.

Of the nine commercially available language tests, only the Test for Auditory Comprehension of Language (Spanish translation) was judged to be sufficient for identifying language handicapped children by greater than 70% of the individuals who judged the adequacy of this test. A total of 28 (71.79%) of the 39 respondents rating this test judged the instrument to be sufficient for handicap identification.

The Screening Test of Spanish Grammar, Del Rio Language Screening Test, and the Ber-Sil Spanish Test are designed to be used as screening tests only. Thus, one would not expect these tests to provide sufficient information to identify children with language handicaps. Each of these tests, however, was judged to be sufficient for the identification of Spanish-dominant children with language handicaps by 50% or more of the respondents who rated the adequacy of these measures.

Few respondents reported dissatisfaction with any of the three Spanish articulation tests listed in Table 13. All 14 respondents who rated the Medida Española de Articulacion indicated that the test provided sufficient information to identify Spanish-dominant children with articulation problems. Thirty-six (94.74%) of the 38 respondents who rated the Austin Spanish Articulation Test judged the test to be sufficient for identifying articulation handicaps. Of the four respondents who rated the Southwestern Spanish

Articulation Test, three (75%) found the test to be adequate.

The reader is advised to use caution in drawing conclusions from the data presented in Table 13 because of the small number of respondents who rated the adequacy of some of the tests listed. It should be noted that all tests judged to be "sufficient" by less than 50% of the respondents were reported to be in use by a small number of individuals.

RESEARCH QUESTION 1.5: What assessment tools other than commercially available tests (e.g., conversational speech samples, locally developed tests, etc.) are being used to evaluate the speech and language skills of Spanish-speaking students?

The extent to which conversational speech samples in Spanish were used to identify Spanish-speaking children with speech and language handicaps was determined based on the data obtained from Question 25 of the survey. Question 26 on the survey asked respondents to describe instruments that had been used with Spanish-speaking students.

In completing Question 25, the speech-language pathologists were asked to respond "YES," "NO," or "I DON'T KNOW" to the question, "Are samples of Spanish-speaking children's conversational speech in Spanish ever used in assessment at your schools to identify speech and/or language handicaps?" The data obtained from this survey item appear in Table 14. All 131 speech-language pathologists who worked at schools where speech and language evaluations had been conducted in Spanish responded to this question. A total of 71

TABLE 14. Number and percentage of speech-language pathologists in public schools where speech and language evaluations had been conducted in Spanish who responded "YES," "NO," and "I DON'T KNOW" to the question: "Are samples of Spanish-speaking children's conversational speech in Spanish ever used in assessment at your schools to identify speech and/or language handicaps?"

Responses of Speech-Language Pathologists to Survey Question 25									
Group	Number of Individuals Responding	Total "YES" Responses		Total "NO" Responses		Total "I DON'T KNOW" Re- sponses		Percent "YES" Responses with "I DON'T KNOW" Responses Ex- cluded. (N=122)	
		No.	%	No.	%	No.	%		
Very Low Hispanic Enrollment Group	30	15	50.00%	12	40.00%	3	10.00%	55.56%	(15 of 27)
Low Hispanic Enrollment Group	36	18	50.00%	15	41.67%	3	8.33%	54.55%	(18 of 33)
Moderate Hispanic Enrollment Group	31	15	48.39%	13	41.94%	3	9.68%	53.57%	(15 of 28)
High Hispanic Enrollment Group	34	23	67.65%	11	32.35%	0	0.00%	67.65%	(23 of 34)
Total	131	71	54.20%	51	38.93%	9	6.87%	58.20%	(71 of 122)

(54.20%) of the 131 responses indicated that Spanish conversational speech samples had been used in assessment at their schools to identify Spanish-speaking children with speech and/or language handicaps. Nine (6.87%) of these respondents, however, responded "I DON'T KNOW" indicating that they did not have the information necessary to respond to the question. If "I DON'T KNOW" responses are excluded in the analysis, 58.20% of the remaining 122 respondents reported use of conversational speech samples in assessment.

Since "I DON'T KNOW" responses indicated that the respondent had no information regarding the use of conversational speech samples in assessment, these responses were eliminated in comparing the four groups of public school speech-language pathologists. The percentage of respondents reporting use of samples of conversational speech in Spanish was then 55.56% for the Very Low Hispanic Enrollment Group, 54.55% for the Low Hispanic Enrollment Group, 53.57% for the Moderate Hispanic Enrollment Group, and 67.65% for the High Hispanic Enrollment Group. These differences were not significant at the .05 level.

Survey respondents' use of informal assessment instruments and locally developed tests was examined based on the data obtained from Question 26 of the survey. This question required respondents to describe any informal assessment instruments, tests developed within the local school district, etc. that had been used to identify Spanish-speaking students with speech and/or language handicaps. A total

of 37 (24.03%) of the 154 speech-language pathologists working in public school speech and language therapy programs responded to this survey item. The results are summarized in Table 15.

Twelve (32.43%) of the 37 respondents to Question 26 reported that locally developed tests had been used in assessment. Two respondents indicated that a screening test had been developed locally. Five respondents specifically mentioned the local development of Pruebas de Expresion Oral y Percepcion de la Lengua Española (PEOPLE).

The use of informal assessment procedures to obtain samples of the child's language behavior was reported by 10 (27.03%) of the respondents. Tasks requiring the child to describe pictures, name objects, and repeat sentences were specifically mentioned. Five respondents reported that informal language samples had been used but failed to describe the specific procedures used to obtain these samples.

The use of questionnaires and/or interview techniques to obtain information regarding the child's language behavior from parents, teachers, etc. was reported by nine (24.32%) of the individuals responding to Question 26.

The local translation of English language tests into Spanish was reported by eight (21.62%) of the 37 individuals who completed Question 26 of the survey. The specific methods that were used to develop the translations were not reported.

TABLE 15. Number and percentage of speech-language pathologists in public schools where speech and language evaluations had been conducted in Spanish who reported use of informal assessment procedures, locally developed tests, etc. on Question 26 of the survey.

Procedure Used	Number Responding (N=37)	Percent
Use of locally developed tests.	12	32.43%
Use of informal assessment procedures to obtain samples of the child's language behavior.	10	27.03%
Use of questionnaires and/or interviews to obtain information about the child's language from parents, teachers, etc.	9	24.32%
Use of locally developed Spanish translations of English tests.	8	21.62%
Use of developmental data on Spanish language acquisition in the analysis and/or interpretation of assessment findings.	3	8.11%
Miscellaneous	5	13.51%

The use of developmental data on Spanish language acquisition to analyze and interpret test findings was reported by three (8.11%) of the respondents on Question 26. One of these respondents specifically mentioned use of the Developmental Assessment of Spanish Grammar (Toronto, 1976), a standardized procedure for analyzing the spontaneous language of children with deficient grammatical skills in Spanish.

Five responses to Question 26 are listed in the category "Miscellaneous" in Table 15. This category includes those responses that did not provide sufficient information to be classified. Several respondents, for example, stated that a variety of procedures had been used in assessment but failed to describe any of these procedures. Since the procedures were not described, there was no way that these responses could be classified.

RESEARCH QUESTION 1.6: What assessment personnel (e.g., speech-language pathologists, bilingual instructional aides, etc.) are being used to evaluate the speech and language skills of Spanish-speaking students, and to what extent are these individuals perceived as competent in test administration and interpretation?

The use of speech-language pathologists and other personnel in evaluating the speech and language skills of Spanish-speaking students was examined in the current research. The extent to which available assessment personnel were perceived as competent for roles in the assessment of Spanish-speaking children was also examined.

Personnel Used in Assessment

The survey instrument used in this research made it possible to study (1) the role of the speech-language pathologist in assessment, (2) the use of personnel other than speech-language pathologists in assessment, and (3) the extent to which individuals who speak Spanish as their primary language had been used in assessment.

Table 16 reports the number and percentage of respondents from each group who were directly involved in administering tests to measure Spanish-dominant children's fluency in English. These data were obtained from Question 15 on the survey. A total of 152 (98.70%) of the 154 speech-language pathologists working in public school speech and language therapy programs responded to this question. Of the 152 respondents, 87 (57.24%) indicated that they had administered tests in English to Spanish-dominant children. The percentage of speech-language pathologists involved in administering assessment instruments in English ranged from a low of 48.65% for the Moderate Hispanic Enrollment Group to a high of 61.90% for the Low Hispanic Enrollment Group. None of the differences between groups was found to be significant at the .05 level.

The extent to which Spanish speech and language tests had been directly administered by the speech-language pathologists returning the survey was determined based on the data obtained from Question 17. The results are shown

TABLE 16. Number and percentage of public school speech-language pathologists who responded "YES" to the question: "Have you administered any commercially available tests to evaluate the Spanish-dominant child's ability to speak English?"

Responses to Survey Question 15			
Group	Number of Individuals Responding	Number of "YES" Re- sponses	Percent "YES" Responses
Very Low Hispanic Enrollment Group	38	22	57.89%
Low Hispanic En- rollment Group	42	26	61.90%
Moderate Hispanic Enrollment Group	37	18	48.65%
High Hispanic En- rollment Group	35	21	60.00%
Total	152	87	57.24%

in Table 17 for each group. Of the 131 speech-language pathologists working in schools where speech and language evaluations had been conducted in Spanish, 53 (40.46%) reported that they were directly involved in administering tests in Spanish. An inspection of the data shows a higher percentage of speech-language pathologists directly involved in testing children in Spanish in the Very High Hispanic Enrollment Group than in any of the other three groups. A comparison between groups using chi-square revealed that the number of speech-language pathologists administering Spanish speech and language tests was significantly higher in the High Hispanic Enrollment Group (61.76%) than in either the Very Low Hispanic Enrollment Group (16.67%) ($p < .001$) or the Low Hispanic Enrollment Group (27.78%) ($p < .01$). The extent to which Spanish speech and language tests had been directly administered by respondents in the Moderate Hispanic Enrollment Group (54.84%) was also found to be significantly greater than either the Very Low Hispanic Enrollment Group ($p < .01$) or the Low Hispanic Enrollment Group ($p < .05$).

The personnel who had been used to test Spanish-speaking children's articulation skills in Spanish were identified based on the data obtained from Question 20 of the survey. The personnel used in testing these children's language skills in Spanish were identified based on the data from Question 21.

In completing Question 20, respondents were asked to mark the titles of all individuals who had administered ar-

TABLE 17. Number and percentage of speech-language pathologists in public schools where speech and language evaluations had been conducted in Spanish who responded "YES" to the question: "Have any of the tests used to evaluate a child's communication skills in Spanish been administered by you?"

Responses to Survey Question 17			
Group	Number of Individuals Responding	Number of "YES" Re- sponses	Percent "YES" Responses
Very Low Hispanic Enrollment Group	30	5	16.67%
Low Hispanic Enrollment Group	36	10	27.78%
Moderate Hispanic Enrollment Group	31	17	54.84%
High Hispanic Enrollment Group	34	21	61.76%
Total	131	53	40.46%

ticulation tests in Spanish. The response choices for this question are presented below; the total number of respondents who selected each response category is listed in the space provided.

90 A. Spanish-speaking speech-language pathologists.

14 B. Spanish-speaking psychologists.

18 C. Spanish-speaking classroom teachers.

50 D. Spanish-speaking classroom instructional aides.

11 E. Other (specify): _____

20 F. Articulation tests have not been administered in Spanish.

The response choice "Other" provided space for the individual to write in the titles of assessment personnel not listed in the previous response categories.

The extent to which Spanish-speaking speech-language pathologists had been involved in administering articulation tests in Spanish is reported in Table 18. All 131 speech-language pathologists working in public schools where speech and language evaluations were conducted in Spanish responded to Question 20. In their responses to this question, 20 respondents indicated that articulation testing had not been conducted in Spanish. Thus, the data presented in Table 18 are based on the responses of 111 (84.73%) of the 131 speech-language pathologists working at schools where articulation testing had been conducted in Spanish.

A total of 90 (81.08%) of the 111 speech-language pathologists for whom data is reported indicated that Span-

i .

TABLE 18. Number and percentage of speech-language pathologists in public schools where articulation tests had been administered in Spanish who reported use of Spanish-speaking speech-language pathologists in articulation testing in response to the question: "Which of the following individuals have administered articulation tests in Spanish when children with possible articulation handicaps have been referred for testing?"

Group	Total Number of Respond- ents	Number of Respondents Who Reported that "Ar- ticulation tests had not been administered in Spanish." (Response Category "F")	Reported Use of Spanish-Speak- ing Speech-Language Patholo- gists in Articulation Testing. (These percentages exclude the responses of the 20 respondents who worked at schools where Spanish articulation tests had not been administered.)	
			Number (N=111)	Percent
Very Low Hispanic Enrollment Group	30	6	17	70.83% (17 of 24)
Low Hispanic Enrollment Group	36	6	25	83.33% (25 of 30)
Moderate Hispanic Enrollment Group	31	4	22	81.48% (22 of 27)
High Hispanic Enrollment Group	34	4	26	86.67% (26 of 30)
Total	131	20	90	81.08% (90 of 111)

ish-speaking speech-language pathologists had been used in articulation testing. The percentage of respondents reporting use of Spanish-speaking speech-language pathologists in articulation testing exceeded 70% for all four of the groups. The differences between groups were not significant at the .05 level.

The extent to which personnel other than speech-language pathologists (e.g., classroom instructional aides) had administered articulation tests in Spanish is shown in Table 19. In reviewing the data presented, the reader is advised to remember that multiple responses were accepted on Question 20 of the survey. Thus, respondents often indicated that individuals from two or more employment categories were involved in administering articulation tests in Spanish. Moreover, a respondent's reported use of assessment personnel other than speech-language pathologists does not mean that the services of Spanish-speaking speech-language pathologists had not also been used. Many respondents who reported the use of Spanish-speaking speech-language pathologists also reported the use of assessment personnel other than speech-language pathologists in articulation testing.

The use of personnel other than speech-language pathologists to administer articulation tests in Spanish was reported by 64 (57.66%) of the 111 speech-language pathologists working at schools where Spanish articulation testing had been conducted. The percentage of respondents reporting

TABLE 19. Number and percentage of speech-language pathologists in public schools where articulation tests had been administered in Spanish who reported use of Spanish-speaking personnel other than speech-language pathologists in articulation testing in response to the question: "Which of the following individuals have administered articulation tests in Spanish when children with possible articulation handicaps have been referred for testing?"

Group	Total Number and Percentage of Respondents Reporting Use of Assessment Personnel Other than Speech-Language Pathologists		Number (No.) and Percentage (%) of Respondents Selecting Each of the Personnel Categories on Survey Question 20. (More than one personnel category was reported to be in use by 29 of the respondents.)							
	Number	Percent	Psychologists		Classroom Teachers		Classroom Aides		Other	
			No.	%	No.	%	No.	%	No.	%
Very Low Hispanic Enrollment Group	14	58.33% (14 of 24)	3	12.50	2	8.33	13	54.17	0	0.00
Low Hispanic Enrollment Group	18	60.00% (18 of 30)	4	13.33	6	20.00	11	36.67	4	13.33
Moderate Hispanic Enrollment Group	13	48.15% (13 of 27)	1	3.70	5	18.52	10	37.04	2	7.41
High Hispanic Enrollment Group	19	63.33% (19 of 30)	6	20.00	5	16.66	16	53.33	5	16.67
Total (N=111) ¹	64	57.66% (64 of 111)	14	12.61	18	16.22	50	45.05	11	9.91

¹The 20 survey respondents who indicated that articulation tests had not been administered in Spanish were excluded in computing these data.

the use of assessment personnel other than Spanish-speaking speech-language pathologists in articulation testing ranged from a low of 48.15% for the Moderate Hispanic Enrollment Group to a high of 63.33% for the High Hispanic Enrollment Group. None of the differences between groups was significant.

The use of Spanish-speaking classroom instructional aides in articulation testing was reported by 50 (45.05%) of the 111 respondents who reported the use of personnel other than Spanish-speaking speech-language pathologists. A total of 18 (16.22%) of the respondents reported the use of Spanish-speaking classroom teachers in assessment. The use of Spanish-speaking psychologists to test articulation was reported by only 14 (12.61%) of the respondents.

The response category "Other" was selected by 11 (9.91%) of the 111 speech-language pathologists working at schools where articulation testing had been conducted in Spanish. Five of these respondents reported that aides working in settings other than the classroom were involved in assessment. The specific types of aides used were speech aides, pupil services aides, and aides who had been trained to serve as assessment personnel. The following additional assessment personnel were each listed in the response category "Other" by a single respondent:

1. Teacher of English as a second language.
2. Spanish-speaking informants.
3. Bilingual program coordinator.

4. Home-school coordinator.
5. Bilingual resource teacher.
6. Parent.

Table 20 shows the extent to which Spanish-speaking speech-language pathologists had been used to administer Spanish language tests to children referred for testing. The data reported in the table were obtained from Question 21 of the survey. The multiple-choice format of Question 21 was similar to that described previously for Question 20. Thus, respondents were asked to mark the titles of all individuals who had administered language tests in Spanish to students referred for testing. The total number of respondents selecting each response category is shown below:

- 102 A. Spanish-speaking speech-language pathologists.
- 28 B. Spanish-speaking psychologists.
- 20 C. Spanish-speaking classroom teachers.
- 58 D. Spanish-speaking classroom instructional aides.
- 15 E. Other (specify): _____
- 1 F. Language tests have not been administered in Spanish.

Only one (0.76%) of the 131 respondents reported that Spanish language tests had not been used. Thus, the percentages in Table 20 are based on the responses of 130 respondents.

The use of Spanish-speaking speech-language pathologists to administer language tests in Spanish was reported by 102 (78.46%) of the 130 respondents working in schools

TABLE 20. Number and percentage of speech-language pathologists in public schools where language tests had been administered in Spanish who reported use of Spanish-speaking speech-language pathologists in language testing in response to the question: "Which of the following individuals have administered language tests in Spanish when children with possible language handicaps have been referred for testing?"

Group	Total Number of Respond- ents	Number of Respondents Who Reported that "Language tests had not been administered in Spanish." (Response Category "F")	Reported Use of Spanish-Speak- ing Speech-Language Patholo- gists in Language Testing. (These percentages exclude the responses of the one speech- language pathologist who re- ported that language tests had not been administered in Span- ish.	
			Number (N=130)	Percent
Very Low Hispanic Enrollment Group	30	0	21	70.00% (21 of 30)
Low Hispanic Enrollment Group	36	1	27	77.14% (27 of 35)
Moderate Hispanic Enrollment Group	31	0	25	80.65% (25 of 31)
High Hispanic Enrollment Group	34	0	29	85.29% (29 of 34)
Total	131	1	102	78.46% (102 of 130)

where language tests had been administered in Spanish. The percentage of survey respondents who reported use of Spanish-speaking speech-language pathologists in language testing was 70.00% for the Very Low Hispanic Enrollment Group, 77.14% for the Low Hispanic Enrollment Group, 80.65% for the Moderate Hispanic Enrollment Group, and 85.29% for the High Hispanic Enrollment Group. There were no significant differences between groups at the .05 level.

The extent to which personnel other than Spanish-speaking speech-language pathologists had been involved in administering Spanish language tests to referred students is shown in Table 21. In reviewing the data, the reader should remember that multiple responses were accepted. Therefore, respondents who reported the use of assessment personnel other than Spanish-speaking speech-language pathologists also, in many cases, indicated that Spanish-speaking speech language pathologists had been involved in testing.

As shown in Table 21, use of Spanish-speaking personnel other than speech-language pathologists to administer language tests was reported by 83 (63.85%) of the 130 respondents working at schools where language tests had been administered to referred students. A comparison of the four groups in terms of the percentage of respondents reporting the use of Spanish-speaking personnel other than Spanish-speaking speech-language pathologists revealed no significant differences at the .05 level. These percentage scores ranged from a low of 54.84% for the Moderate Hispanic En-

TABLE 21. Number and percentage of speech-language pathologists in public schools where language tests had been administered in Spanish who reported use of Spanish-speaking personnel other than speech-language pathologists in language testing in response to the question: "Which of the following individuals have administered language tests in Spanish when children with possible language handicaps have been referred for testing?"

Group	Total Number and Percentage of Respondents Reporting Use of Assessment Personnel Other than Speech-Language Pathologists		Number (No.) and Percentage (%) of Respondents Selecting Each of the Personnel Categories on Survey Question 20. (More than one personnel category was reported to be in use by 38 of the respondents.)							
	Number	Percent	Psycho- logists		Classroom Teachers		Classroom Aides		Other	
			No.	%	No.	%	No.	%	No.	%
Very Low Hispanic Enrollment Group	20	66.67% (20 of 30)	5	16.67	3	10.00	14	46.67	0	0.00
Low Hispanic Enrollment Group	23	65.71% (23 of 35)	8	22.86	6	17.14	13	37.14	7	20.00
Moderate Hispanic Enrollment Group	17	54.84% (17 of 31)	5	16.13	6	19.35	12	38.71	4	12.90
High Hispanic Enrollment Group	23	67.65% (23 of 34)	10	29.41	5	14.71	19	55.88	4	11.76
Total (N=130) ¹	83	63.85% (83 of 130)	28	21.54	20	15.38	58	44.62	15	11.54

¹The survey respondent who indicated that language tests had not been administered in Spanish was excluded in computing these data.

rollment Group to a high of 67.65% for the High Hispanic Enrollment Group.

Spanish-speaking classroom aides were reported to be involved in administering language tests by 58 (44.62%) of the 130 speech-language pathologists working in schools where language tests had been administered in Spanish. The administration of language tests by Spanish-speaking psychologists was reported by 28 (21.54%) of these respondents. The use of Spanish-speaking classroom teachers in language testing was reported by 20 (15.38%) of the respondents.

A total of 15 (11.54%) of the 130 speech-language pathologists working at schools where language tests had been administered in Spanish selected the response category "Other" and listed specific personnel involved in language testing. Seven of these respondents indicated that aides working in settings other than the classroom were involved in language testing. Included in this category were office aides, pupil services aides, speech aides, and aides who had been trained to serve as assessment personnel. Four respondents listed teachers of English as a second language as personnel involved in the language testing of referred students. The use of home-school coordinators, Spanish-speaking informants, bilingual resource teachers, and parent volunteers were each reported by a single respondent.

The extent to which native Spanish speakers had been involved in administering tests to Spanish-speaking stu-

dents was determined based on the data from Question 22 of the survey. The results are profiled in Table 22 for speech-language pathologists working in schools where speech and language evaluations had been conducted in Spanish. Respondents were asked to answer "YES," "NO," or "I DON'T KNOW" to the question, "Have persons who speak Spanish as their primary language ever been involved in administering articulation and/or language tests to Spanish-speaking children who have been referred for testing at your schools?" Of the 131 public school speech-language pathologists who completed this question, 70 (53.44%) reported that individuals who speak Spanish as their primary language had been involved in administering articulation and/or language tests to Spanish-speaking students. Seventeen of these individuals, however, responded "I DON'T KNOW" to the question. If these "I DON'T KNOW" responses are excluded, the result is that 61.40% of the remaining 114 respondents had utilized individuals who speak Spanish as their primary language when testing Spanish-speaking students.

The "I DON'T KNOW" responses were excluded when comparing the four groups of public school speech-language pathologists because these responses indicated lack of knowledge of whether primary speakers of Spanish had been used. The percentage of respondents reporting the use of assessment personnel who speak Spanish as their primary language was lowest for the Very Low Hispanic Enroll-

TABLE 22. Number and percentage of speech-language pathologists in public schools where speech and language evaluations had been conducted in Spanish who responded "YES," "NO," and "I DON'T KNOW" to the question: "Have persons who speak Spanish as their primary language ever been involved in administering articulation and/or language tests to Spanish-speaking children who have been referred for testing at your schools?"

Responses of Speech-Language Pathologists to Survey Question 22.									
Group	Number of Individuals Responding	Total "YES" Responses		Total "NO" Responses		Total "I DON'T KNOW" Re- sponses		Percent "YES" Responses with "I DON'T KNOW" Responses Ex- cluded. (N=114)	
		No.	%	No.	%	No.	%		
Very Low Hispanic Enrollment Group	30	13	43.33%	14	46.67%	3	10.00%	48.15%	(13 of 27)
Low Hispanic En- rollment Group	36	19	52.78%	10	27.78%	7	19.44%	65.52%	(19 of 29)
Moderate Hispanic Enrollment Group	31	16	51.61%	13	41.94%	2	6.45%	55.17%	(16 of 29)
High Hispanic Enrollment Group	34	22	64.71%	7	20.59%	5	14.71%	75.86%	(22 of 29)
Total	131	70	53.44%	44	33.59%	17	12.98%	61.40%	(70 of 114)

ment Group (48.15%) and highest for the High Hispanic Enrollment Group (75.86%). The difference between the High Hispanic Enrollment Group and the Very Low Hispanic Enrollment Group was significant at the .05 level. No other differences between groups were significant.

The extent to which native speakers of Spanish had been involved in interpreting test data obtained in speech and language evaluations conducted with Spanish-speaking students was examined based on the information obtained from Question 23 of the survey. The results appear in Table 23. The question was completed by the 131 speech-language pathologists working in public school speech and language therapy programs where testing had been conducted in Spanish. A total of 58 (44.27%) of the 131 respondents reported that individuals who speak Spanish as their primary language had been used in interpreting test findings. Twenty-one speech-language pathologists, however, responded "I DON'T KNOW" to the question, indicating that they did not have the information necessary to respond to the survey item. When "I DON'T KNOW" responses are excluded, the data reveal that 52.73% of the remaining 110 respondents reported use of individuals who speak Spanish as their primary language, in the interpretation of test data.

The 21 "I DON'T KNOW" responses were excluded from the analysis when the four groups of public school speech-language pathologists were compared. Thus, the percentage of respondents reporting use of primary speakers of Spanish

TABLE 23. Number and percentage of speech-language pathologists in public schools where speech and language evaluations had been conducted in Spanish who responded "YES," "NO," and "I DON'T KNOW" to the question: "Have persons who speak Spanish as their primary language ever been involved in interpreting test data obtained in speech and language evaluations conducted with Spanish-speaking children who have been referred for testing at your schools?"

Responses of Speech-Language Pathologists to Survey Question 23.									
Group	Number of Individuals Responding	Total "YES" Responses		Total "NO" Responses		Total "I DON'T KNOW" Re- sponses		Percent "YES" Responses with "I DON'T KNOW" Responses Ex- cluded. (N=110)	
		No.	%	No.	%	No.	%		
Very Low Hispanic Enrollment Group	30	10	33.33%	16	53.33%	4	13.33%	38.46%	(10 of 26)
Low Hispanic En- rollment Group	36	14	38.89%	12	33.33%	10	27.78%	53.85%	(14 of 26)
Moderate Hispanic Enrollment Group	31	17	54.84%	11	35.48%	3	9.68%	60.71%	(17 of 28)
High Hispanic Enrollment Group	34	17	50.00%	13	38.24%	4	11.76%	56.67%	(17 of 30)
Total	131	58	44.27%	52	39.69%	21	16.03%	52.73%	(58 of 110)

in test interpretation was 38.46% for the Very Low Hispanic Enrollment Group, 53.85% for the Low Hispanic Enrollment Group, 60.71% for the Moderate Hispanic Enrollment Group and 56.67% for the High Hispanic Enrollment Group. The differences observed between groups were not significant at the .05 level.

Competencies of Available Assessment Personnel

The extent to which speech-language pathologists had access to assessment personnel with the competencies necessary to accurately identify Spanish-dominant children with articulation handicaps was determined using the data from Question 18 of the survey. Question 19 provided the data used in determining the extent to which speech-language pathologists had access to assessment personnel with the competencies necessary to accurately identify children demonstrating language handicaps. Questions 18 and 19 were both completed by the 131 speech-language pathologists working in public schools where speech and language evaluations had been conducted in Spanish.

As shown in Table 24, 104 (79.39%) of the speech-language pathologists responding to Question 18 reported that the assessment personnel available to them had the competencies necessary to accurately identify Spanish-dominant children with articulation handicaps. The percentage of respondents reporting access to assessment personnel with the competencies needed to identify articulation handicaps among Spanish-dominant students ranged from a

TABLE 24. Number and percentage of speech-language pathologists in public schools where speech and language evaluations had been conducted in Spanish who responded "YES" to the question: "Do the assessment personnel currently available to you have the competencies necessary to accurately identify Spanish-dominant children with articulation handicaps?"

Responses to Survey Question 18			
Group	Number of Individuals Responding	Number of "YES" Re- sponses	Percent "YES" Responses
Very Low Hispanic Enrollment Group	30	21	70.00%
Low Hispanic Enrollment Group	36	30	83.33%
Moderate Hispanic Enrollment Group	31	27	87.10%
High Hispanic Enrollment Group	34	26	76.47%
Total	131	104	79.39%

low of 70.00% for the Very Low Hispanic Enrollment Group to a high of 87.10% for the Moderate Hispanic Enrollment Group. Differences between groups were not significant at the .05 level.

Respondents who indicated that the assessment personnel available to them were not appropriately qualified to identify Spanish-dominant children with articulation handicaps were asked to specify the reason for their answer. Of the 22 respondents who specified reasons, 18 (81.82%) specifically mentioned lack of fluency in Spanish and/or lack of sufficient training. Two respondents (9.09%) reported that the assessment personnel available were not appropriately qualified because testing was conducted by personnel other than speech-language pathologists (e.g., classroom aides). The remaining two respondents (9.09%) reported that they did not have assessment personnel available to conduct the testing.

The results obtained from Question 19 of the survey, as shown in Table 25, were that 106 (80.92%) of the respondents reported that they had access to assessment personnel with the competencies necessary to identify Spanish-dominant children with language handicaps. The percentage of respondents reporting that appropriately qualified assessment personnel were available to them was 70.00% for the Very Low Hispanic Enrollment Group, 86.11% for the Low Hispanic Enrollment Group, 83.87% for the Moderate Hispanic Enrollment Group, and 82.35% for the High Hispanic

TABLE 25. Number and percentage of speech-language pathologists in public schools where speech and language evaluations had been conducted in Spanish who responded "YES" to the question: "Do the assessment personnel currently available to you have the competencies necessary to accurately identify Spanish-dominant children with language handicaps?"

Responses to Survey Question 19			
Group	Number of Individuals Responding	Number of "YES" Re- sponses	Percent "YES" Responses
Very Low Hispanic Enrollment Group	30	21	70.00%
Low Hispanic En- rollment Group	36	31	86.11%
Moderate Hispanic Enrollment Group	31	26	83.87%
High Hispanic En- rollment Group	34	28	82.35%
Total	131	106	80.92%

Enrollment Group. The differences observed between groups were not significant.

Survey respondents who indicated that the assessment personnel available to them lacked the competencies necessary to identify Spanish-dominant children with language handicaps were asked to specify the reason for their answer. Of the 22 respondents who specified reasons, 14 (63.64%) reported lack of fluency in Spanish and/or lack of training. Deficiencies in basic formal education were reported by two (9.09%) of the respondents who specified reasons. The remaining two respondents (9.09%) specified that the assessment personnel available to them demonstrated a general lack of competency but failed to indicate the specific competencies that were lacking.

Survey Respondents' Qualifications to Conduct Assessments with Spanish-Speaking Students

The results are presented in this section for the two research questions posed in Chapter I that related to survey respondents' qualifications to conduct speech and language evaluations with Spanish-speaking students. The chi-square test was used to determine the significance of observed differences between the four groups of speech-language pathologists working in public school speech and language therapy programs. The analysis of data for the first research question presented in this section is based on information obtained from a survey item that only the 154 speech-language pathologists working in pub-

lic school speech and language therapy programs were asked to complete; the analysis of data for the second research question presented is based on information obtained from the entire sample of survey respondents in all work settings.

RESEARCH QUESTION 2.1: To what extent do speech-language pathologists have the knowledge necessary to identify English articulation errors that are commonly produced by children who come from homes where Spanish is spoken?

The 154 speech-language pathologists working in public school speech and language therapy programs were asked, on Question 16 of the survey, to indicate whether or not they had the knowledge necessary to identify English articulation errors that are commonly produced by children who come from homes where Spanish is spoken. The results are reported in Table 26. A total of 124 (80.52%) of the 154 respondents reported that they were able to identify English articulation errors commonly produced by children from Spanish-speaking environments. The percentage of respondents reporting that they had the knowledge necessary to identify commonly produced English articulation errors was 71.05% for the Very Low Hispanic Enrollment Group, 83.72% for the Low Hispanic Enrollment Group, 75.68% for the Moderate Hispanic Enrollment Group, and 91.67% for the High Hispanic Enrollment Group. The difference between the High Hispanic Enrollment Group and the Very Low Hispanic Enrollment Group was significant at the .05 level.

TABLE 26. Number and percentage of public school speech-language pathologists who responded "YES" to the question: "Do you have the knowledge necessary to identify English articulation errors that are commonly produced by children who come from homes where Spanish is spoken (i.e., articulation errors resulting from differences in the English and Spanish sound systems.)?"

Responses to Survey Question 16			
Group	Number of Individuals Responding	Number of "YES" Re- sponses	Percent "YES" Responses
Very Low Hispanic Enrollment Group	38	27	71.05%
Low Hispanic En- rollment Group	43	36	83.72%
Moderate Hispanic Enrollment Group	37	28	75.68%
High Hispanic En- rollment Group	36	33	91.67%
Total	154	124	80.52%

No other significant differences between groups were observed.

RESEARCH QUESTION 2.2: To what extent do speech-language pathologists in public school speech and language therapy programs and survey respondents working in other clinical or educational settings have the fluency in Spanish and the training in bilingual assessment procedures necessary to evaluate the speech and language skills of Spanish-speaking students?

Fluency in Spanish

In assessing the Spanish-speaking child's fluency in Spanish, monolingual speech-language pathologists in public school speech and language therapy programs may often find it necessary to obtain the assistance of Spanish-speaking members of the profession employed in other clinical or educational settings (e.g., full-day special education classrooms, private practice, etc.). Therefore, all survey respondents were asked to complete survey questions relating to their knowledge of the Spanish language (i.e., Questions 8 and 9).

Question 8 on the survey asked respondents to indicate whether or not they knew Spanish well enough to transcribe and analyze syntax from tape-recorded samples of spontaneous speech. As shown in Table 27, only 18 (11.69%) of the 154 speech-language pathologists working in public school speech and language therapy programs reported that they had the knowledge of Spanish necessary to transcribe and analyze samples of conversational speech obtained in Spanish. In the sample it was found that, as the per-

TABLE 27. Number and percentage of public school speech-language pathologists who responded "YES" to the question: "Do you know Spanish well enough to transcribe and analyze syntax from tape-recorded samples of conversational speech in Spanish?"

Responses to Survey Question 8			
Group	Number of Individuals Responding	Number of "YES" Re- sponses	Percent "YES" Responses
Very Low Hispanic Enrollment Group	38	1	2.63%
Low Hispanic En- rollment Group	43	3	6.98%
Moderate Hispanic Enrollment Group	37	4	10.81%
High Hispanic En- rollment Group	36	10	27.78%
Total	154	18	11.69%

centage of Hispanic enrollment in the school population increased, there was an increase in the percentage of speech-language pathologists with the knowledge of Spanish necessary to transcribe and analyze conversational speech samples. The percentage of respondents reporting that they had this knowledge was 2.63% for the Very Low Hispanic Enrollment Group, 6.98% for the Low Hispanic Enrollment Group, 10.81% for the Moderate Hispanic Enrollment Group, and 27.78% for the High Hispanic Enrollment Group. The High Hispanic Enrollment Group was found to have a significantly higher percentage of respondents capable of transcribing and analyzing Spanish speech samples than either the Very Low Hispanic Enrollment Group ($p < .01$) or the Low Hispanic Enrollment Group ($p < .05$). There were no other differences between groups that were significant at the .05 level.

Table 28 shows the percentage of survey respondents not employed as speech-language pathologists in public school speech and language therapy programs who indicated that they had the fluency in Spanish needed to transcribe and analyze samples of Spanish-speaking children's conversational speech. As shown in the table, only two (4.88%) of the 41 respondents who were teachers of full-day special education classrooms reported that they spoke Spanish fluently enough to transcribe and analyze children's conversational speech. A total of six (13.04%) of the 46 respondents who listed their employment in the re-

TABLE 28. Number and percentage of survey respondents working in settings other than public school speech and language therapy who responded "YES" to the question: "Do you know Spanish well enough to transcribe and analyze syntax from tape-recorded samples of conversational speech in Spanish?"

Responses to Survey Question 8			
Employment	Number of Individuals Responding	Number of "YES" Re- sponses	Percent "YES" Responses
Teachers of Full-Day Special Education Classrooms	41	2	4.88%
Other ¹	46	6	13.04%
Total	87	8	9.20%

¹The employment category "Other" includes respondents working as administrators, program specialists, speech-language pathologists in private practice, hospitals, etc.

sponse category "Other" (i.e., administrators, program specialists, speech-language pathologists employed in hospitals, private practice, etc.) reported sufficient fluency in Spanish to transcribe and analyze conversational speech. Thus, the knowledge of Spanish necessary to transcribe and analyze samples of Spanish conversation was reported by only eight (9.20%) of the total sample of 87 survey respondents who were not working in public school speech and language therapy programs.

Question 9 on the survey was designed to provide information regarding the extent to which survey respondents understood basic Spanish vocabulary words such as those that are often used on Spanish vocabulary tests designed for elementary school children. This survey item presented a list of five common Spanish nouns selected from three language dominance tests developed for use with Spanish-speaking children in the primary elementary school grades. The Spanish words listed were "martillo" (hammer), "peine" (comb), "pan" (bread), "queso" (cheese), and "lumbre" (fire). Respondents were asked to indicate whether or not they comprehended the entire list of Spanish words.

As shown in Table 29, only 30 (19.48%) of the 154 speech-language pathologists from public school speech and language therapy programs indicated that they comprehended all five words. The percentage of respondents reporting comprehension of all five Spanish nouns was 10.53% for the Very Low Hispanic Enrollment Group, 11.63% for the Low

TABLE 29. Number and percentage of public school speech-language pathologists who responded "YES" when presented with a list of five words from commonly used language dominance tests followed by the question: "Do you know Spanish well enough to administer vocabulary tests that require the examiner to comprehend nouns such as those listed above? (Please respond 'yes' only if you comprehend the meaning of all five of the Spanish words above.)"

Responses to Survey Question 9			
Group	Number of Individuals Responding	Number of "YES" Re- sponses	Percent "YES" Responses
Very Low Hispanic Enrollment Group	38	4	10.53%
Low Hispanic En- rollment Group	43	5	11.63%
Moderate Hispanic Enrollment Group	37	9	24.32%
High Hispanic En- rollment Group	36	12	33.33%
Total	154	30	19.48%

Hispanic Enrollment Group, 24.32% for the Moderate Hispanic Enrollment Group, and 33.33% for the High Hispanic Enrollment Group. Thus, the percentage of respondents who indicated that they understood the five words increased as the size of the Hispanic enrollment in the school population increased. The percentage of respondents in the High Hispanic Enrollment Group reporting comprehension of all five words was significantly higher than that obtained in either the Very Low Hispanic Enrollment Group ($p < .05$) or the Low Hispanic Enrollment Group ($p < .05$). No other significant differences between the groups were found.

Table 30 shows the extent to which all five Spanish vocabulary words were understood by survey respondents who were not employed in public school speech and language therapy programs. Thirty-nine (95.12%) of the 41 respondents employed as teachers of full-day special education classrooms responded to this question. Four (10.26%) of these 39 respondents reported that they comprehended all five of the Spanish words. Of the 46 respondents in the employment category "Other," a total of nine individuals (19.57%) reported comprehension of these five words. The totals reported in Table 30 for survey respondents not involved in public school speech and language therapy show that only 13 (15.29%) of the 85 responding individuals reported knowledge of the five Spanish words.

Even though Question 9 provided information regarding survey respondents' knowledge of only five Spanish nouns,

TABLE 30. Number and percentage of survey respondents working in settings other than public school speech and language therapy who responded "YES" when presented with a list of five words from commonly used language dominance tests followed by the question: "Do you know Spanish well enough to administer vocabulary tests that require the examiner to comprehend nouns such as those listed above? (Please respond 'yes' only if you comprehend the meaning of all five of the Spanish words above.)"

Responses to Survey Question 9			
Employment	Number of Individuals Responding	Number of "YES" Re- sponses	Percent "YES" Responses
Teachers of Full-Day Special Education Classrooms	39	4	10.26%
Other ¹	46	9	19.57%
Total	85	13	15.29%

¹The employment category "Other" includes respondents working as administrators, program specialists, speech-language pathologists in private practice, hospitals, etc.

the specific words tested were all selected from assessment instruments that test very basic vocabulary. Therefore, the data obtained from Question 9 suggest that the majority of survey respondents in all employment settings may not be familiar with even the basic vocabulary words used in Spanish language tests that are commonly administered to elementary school children in the primary grades.

Training in Bilingual Assessment Procedures

In conducting evaluations with Spanish-speaking students, speech-language pathologists in public school speech and language therapy programs may often find that they need assistance from members of the profession who have specific training relevant to Spanish speech and/or language assessment, but who work in settings other than public school speech and language therapy programs. Therefore, all 241 respondents were asked to complete survey questions relating to their involvement in coursework (Question 6) and workshops (Question 7) in which information was presented relevant to the speech and language assessment of Spanish-speaking children.

The extent to which survey respondents' previous coursework in speech and language pathology included subject matter relating to specific test instruments designed for use in evaluating the speech and language skills of Spanish-speaking students was determined based on the data from Question 6 on the survey. The results are presented

in Table 31 for the speech-language pathologists working in public school speech and language therapy programs. Responses to Question 6 were provided by 153 (99.35%) of the 154 public school speech-language pathologists in the sample. A total of 43 (28.10%) of these 153 respondents reported that their previous coursework included subject matter relating to test instruments used with Spanish-speaking children. The percentage of respondents reporting completion of such coursework was 21.62% for the Very Low Hispanic Enrollment Group, 30.23% for the Low Hispanic Enrollment Group, 21.62% for the Moderate Hispanic Enrollment Group, and 38.89% for the High Hispanic Enrollment Group. None of these differences between groups was significant at the .05 level.

Table 32 shows the results from Question 6 for survey respondents employed in settings other than public school speech and language therapy programs. A total of 26 (29.89%) of the 87 respondents who were not employed as speech-language pathologists in public school speech and language therapy programs reported that they had completed coursework in which test instruments designed for use with Spanish-speaking individuals were covered. Of the 41 teachers of full-day special education classrooms, 12 (29.27%) had completed such coursework. Fourteen (30.43%) of the 46 respondents in the employment category "Other" indicated that their previous coursework included subject matter relating to specific tests designed for use with

TABLE 31. Number and percentage of public school speech-language pathologists who responded "YES" to the question: "Did your previous coursework in speech and language pathology include subject matter relating to specific test instruments designed for use in evaluating the speech and language skills of Spanish-speaking students?"

Responses to Survey Question 6			
Group	Number of Individuals Responding	Number of "YES" Re- sponses	Percent "YES" Responses
Very Low Hispanic Enrollment Group	37	8	21.62%
Low Hispanic Enrollment Group	43	13	30.23%
Moderate Hispanic Enrollment Group	37	8	21.62%
High Hispanic Enrollment Group	36	14	38.89%
Total	153	43	28.10%

TABLE 32. Number and percentage of survey respondents working in settings other than public school speech and language therapy who responded "YES" to the question: "Did your previous coursework in speech and language pathology include subject matter relating to specific test instruments designed for use in evaluating the speech and language skills of Spanish-speaking students?"

Responses to Survey Question 6			
Employment	Number of Individuals Responding	Number of "YES" Re- sponses	Percent "YES" Responses
Teachers of Full-Day Special Education Classrooms	41	12	29.27%
Other ¹	46	14	30.43%
Total	87	26	29.89%

¹The employment category "Other" includes respondents working as administrators, program specialists, speech-language pathologists in private practice, hospitals, etc.

Spanish-speaking students.

The extent to which survey respondents had attended workshops relating to the identification of Spanish-speaking children with speech and language handicaps was determined based on responses to Question 7 of the survey. As shown in Table 33, attendance at workshops relating to the identification of Spanish-speaking children with speech and language handicaps was reported by 114 (74.03%) of the 154 speech-language pathologists working in public school speech and language therapy programs. The percentage of respondents reporting participation in workshops was 60.53% for the Very Low Hispanic Enrollment Group, 79.07% for the Low Hispanic Enrollment Group, 70.27% for the Moderate Hispanic Enrollment Group, and 86.11% for the High Hispanic Enrollment Group. The difference between the High Hispanic Enrollment Group and the Very Low Hispanic Enrollment Group was significant at the .05 level. No other differences between groups were significant.

Attendance at workshops relating to the identification of Spanish-speaking children with speech and language handicaps was reported by a total of 40 (45.98%) of the 87 respondents who were not employed as speech-language pathologists in public school speech and language therapy programs. Twenty (48.78%) of the 41 teachers of full-day special education classrooms indicated that they had attended workshops on the identification of communicatively handicapped Spanish-speaking children. Of the 46 re-

TABLE 33. Number and percentage of public school speech-language pathologists who responded "YES" to the question: "Have you attended any workshops relating to the identification of Spanish-speaking children with speech and language handicaps?"

Group	Responses to Survey Question 7		
	Number of Individuals Responding	Number of "YES" Re- sponses	Percent "YES" Responses
Very Low Hispanic Enrollment Group	38	23	60.53%
Low Hispanic Enrollment Group	43	34	79.07%
Moderate Hispanic Enrollment Group	37	26	70.27%
High Hispanic Enrollment Group	36	31	86.11%
Total	154	114	74.03%

spondents in the employment category "Other," a total of 20 (43.48%) reported that they had participated in workshops on assessment, when completing Question 7 on the survey. Table 34 summarizes the data from Question 7 for survey respondents employed in settings other than public school speech and language therapy programs.

The data obtained from Question 6 on the survey revealed that approximately one out of three public school speech-language pathologists had completed coursework relating to specific test instruments used in evaluating the speech and language skills of Spanish-speaking students. The data obtained from Question 7, however, revealed that workshops relating to the identification of Spanish-speaking children with speech and language handicaps were attended by almost three out of four speech-language pathologists in the public schools. These workshops may have provided many speech-language pathologists with information about Spanish speech and language tests that had not been presented to them in their formal training in speech-language pathology. The extent to which workshops had provided speech-language pathologists with information about Spanish test instruments that had not been included in their formal coursework in speech-language pathology was not examined in the current research.

TABLE 34. Number and percentage of survey respondents working in settings other than public school speech and language therapy who responded "YES" to the question: "Have you attended any workshops relating to the identification of Spanish-speaking children with speech and language handicaps?"

Responses to Survey Question 7			
Employment	Number of Individuals Responding	Number of "YES" Re- sponses	Percent "YES" Responses
Teachers of Full-Day Special Education Classrooms	41	20	48.78%
Other ¹	46	20	43.48%
Total	87	40	45.98%

¹The employment category "Other" includes respondents working as administrators, program specialists, speech-language pathologists in private practice, hospitals, etc.

Survey Respondents' Comments and Suggestions
Relating to Assessment Procedures

Question 27 on the survey was an open-ended item that provided speech-language pathologists in public school speech and language therapy programs with the opportunity to state additional comments and to make suggestions regarding assessment procedures used with Spanish-speaking students. This survey item read as follows:

27. The space below is for any additional comments or suggestions that you would like to make regarding procedures used in conducting speech and language evaluations with Spanish-speaking students.

The small number of respondents making any single comment or suggestion precluded the use of statistical data analysis procedures to compare the four groups of public school speech-language pathologists. Thus, rather than presenting an in-depth statistical analysis of these data, a detailed description is presented of the range of responses produced.

A total of 45 (29.22%) of the 154 speech-language pathologists working in public school speech and language therapy programs responded to Question 27 on the survey. Ten (22.22%) of these respondents commented that available tests were inadequate and/or that there was a need for improved tests. One respondent indicated that it had been necessary to modify the vocabulary of tests that were translations of English assessment instruments because of "inaccuracies." Respondents who expressed dissatisfaction

tion with available tests, however, generally did not state the reason for their dissatisfaction.

Several respondents stressed the importance of including procedures other than formal tests in evaluating the speech and language of Spanish-speaking students. The importance of spending sufficient time with the children and the value of observing their behavior informally were mentioned. One respondent expressed the viewpoint that articulation can be assessed without tests by listening informally to the children's speech.

A variety of specific suggestions were made regarding the use of tests with Spanish-speaking students. These suggestions are summarized below:

1. More formal tests are needed that can be used to compare English and Spanish.
2. A Spanish language test similar in content to the Utah Test of Language Development is needed.
3. Tests for children in grades three and up need to be improved.
4. Tests are needed that can be used to distinguish between language differences and language handicaps.
5. More emphasis should be placed on the use of informal assessment procedures.

Seven (15.56%) of the 45 respondents to Question 27 commented regarding issues that have relevance in the interpretation of test data. One respondent reported that tests normed on Anglo student populations had been misused

with Spanish-speaking populations. Misuse of a mental age derived from the Peabody Picture Vocabulary Test was specifically mentioned. Another respondent reported that it is extremely difficult to distinguish language handicaps from problems resulting from lack of exposure to the language. Suggestions made by respondents that have relevance for the interpretation of assessment data were the following:

1. Norms are needed that can be used in interpreting language data obtained from Spanish speakers. The need for local norms on available tests was mentioned.
2. Cultural factors must be taken into account in interpreting test findings.
3. Test results must be questioned when the tests are administered by personnel who do not speak Spanish as their primary language.
4. Guidelines for identifying communicatively handicapped Spanish-speaking children are needed.

A total of eight (17.78%) of the 45 speech-language pathologists who responded to Question 27 commented regarding the shortage of bilingual assessment personnel. Specifically mentioned were the need for more bilingual aides to participate in test administration and the need for more bilingual speech-language pathologists.

The use of personnel other than speech-language pathologists in assessment was reported by respondents who did

not have access to assessment personnel with training in speech-language pathology. The use of classroom teachers and instructional aides were both reported. Specific comments and suggestions that have relevance for the use of assessment personnel are summarized below:

1. Speech-language pathologists should coordinate their testing with the testing conducted in bilingual education programs.
2. Data obtained from the classroom teacher can be of value in comparing a child's performance with that of peers.
3. The use of bilingual speech-language pathologists to conduct evaluations who are not native speakers of Spanish is preferable to the use of native speakers who have no training in assessment.
4. It often takes a long time to complete the evaluation of Spanish-speaking students because of the shortage of bilingual assessment personnel.
5. Assessment is difficult when qualified assessment personnel are not available. Without assistance in assessment, one must make independent judgments in an area where expertise is lacking.

Two speech-language pathologists reported that they had been involved in administering tests in Spanish even though they did not speak the language. One of these respondents reported giving screening tests in Spanish to referred students. Children who failed the screening

would then be evaluated by a bilingual speech-language pathologist. The other monolingual speech-language pathologist who indicated involvement in test administration had given tests that required the examiner to read the test items to the child.

Comments and suggestions relating to the training and language fluency needs of professionals in the field of speech-language pathology were made by five (11.11%) of the 45 individuals who responded to Question 27. Several additional respondents commented regarding their own personal need to learn Spanish or current efforts that they were making to acquire the language. Responses relating to the training and language fluency needs of speech-language pathologists are summarized below:

1. Speech-language pathologists should acquire greater fluency in Spanish.
2. A course in nondiscriminatory assessment is recommended for assessment personnel.
3. It is important to acquire knowledge of Spanish linguistics.
4. There is a need for speech-language pathologists to learn to distinguish language differences from language handicaps.
5. Speech-language pathologists should become familiar with the literature on bilingual language assessment.

Although the survey instrument used in the current research focused specifically on issues in the assessment

of Spanish-speaking students, several respondents commented regarding the lack of availability of speech and language therapy programs to meet the needs of these students. One respondent reported that speech and language evaluations had been conducted in Spanish, but speech and language therapy services were not available in Spanish for those students who were identified as handicapped.

Not all survey respondents, however, felt that the services available in speech and language therapy programs should be provided in Spanish. Two of the speech-language pathologists responding to Question 27 indicated that instructional services should be available only in English because this is an English-speaking country. The effect that viewpoints of this nature have on the availability of assessment services for Spanish-speaking children with possible speech and language handicaps is an issue that warrants further study.

The data obtained from Question 27 make it clear that lack of adequate test instruments and the shortage of qualified assessment personnel are both important factors contributing to difficulties that speech-language pathologists are having in their efforts to appropriately assess the speech and language skills of Spanish-speaking students. Moreover, there appears to be a need for better methods of interpreting test data so that language handicaps can be distinguished from the language difficulties

commonly observed among children growing up in a world where two languages are spoken.

CHAPTER V
DISCUSSION OF THE FINDINGS AND PRESENTATION
OF THE ASSESSMENT GUIDELINES

The purpose of this chapter is to present a discussion of the findings of this research and to propose a comprehensive set of assessment guidelines. The discussion begins with a brief overview of the major findings of this research. A detailed discussion is then presented covering (1) the use of test instruments in assessment, (2) the roles and responsibilities of speech-language pathologists in the assessment of Spanish-speaking students, (3) the use of bilingual personnel other than speech-language pathologists in testing Spanish-speaking children, and (4) the training of speech-language pathologists in skills necessary for conducting speech and language evaluations with children who speak Spanish. The assessment guidelines developed as a result of this research cover these same four areas.

Discussion of the Findings

In the current study a survey instrument was distributed to members of the American Speech-Language-Hearing Association in Los Angeles County to obtain information regarding the procedures used to identify Spanish-speaking

children with speech and language handicaps and to examine the extent to which survey respondents were qualified to conduct evaluations with these students. By restricting the study to members of the American Speech-Language-Hearing Association, the researcher was able to utilize input from a sample of the most highly qualified professionals in the field when developing the assessment guidelines.

Each of the 154 surveys returned by speech-language pathologists working in public school speech and language therapy programs was placed into one of four groups for data analysis purposes based on the percentage of students who were Hispanic in the school setting where therapy was conducted. The use of Spanish speech and language screening tests, the availability of Spanish-speaking speech-language pathologists, and the availability of speech and language therapy in Spanish were all found to be higher in schools with high Hispanic enrollments than in schools where Hispanic enrollment was low. This finding indicates that speech and language therapy programs in schools with high Hispanic enrollments were better equipped to meet the needs of Spanish-speaking children.

The survey data revealed that speech-language pathologists experienced a variety of problems in the identification of Spanish-speaking children with speech and language handicaps. Survey respondents frequently reported that commercially available Spanish language tests had not provided the information necessary to identify Spanish-speak-

ing children with language handicaps. The data also indicated that there was a shortage of personnel qualified to evaluate the speech and language skills of Spanish-speaking students. These problems were reported by speech-language pathologists working in schools where Hispanic enrollment was low and also by speech-language pathologists working in schools where Hispanic enrollment was high. Thus, the inadequacies of commercially available tests and the shortage of personnel qualified to conduct the testing were problems commonly experienced in schools where testing had been conducted in Spanish.

The results of this study confirm viewpoints expressed in the literature regarding the questionable validity of published tests designed for the Spanish-speaking child (Day, McCollum, Cieslak, and Erickson, 1981; Silverman, Noa, and Russell, 1976). There is a need to question the appropriateness of educational decisions made in speech and language therapy programs when those decisions were based solely on scores derived from published tests. Tests should be used in conjunction with conversational speech samples to ensure that any suspected handicap is present in natural speaking situations. In Los Angeles County, samples of conversational speech were often not included in the assessment battery.

Public Law 94-142 guarantees all children the right to an evaluation in their dominant language. Speech-lan-

guage pathologists, however, were not always able to ensure evaluations in Spanish because of the shortage of qualified assessment personnel. The survey data revealed that most speech-language pathologists did not even have an understanding of basic Spanish vocabulary.

The survey used in the current research was distributed only to individuals who had the academic training necessary for membership in the American Speech-Language-Hearing Association. Thus, all survey respondents held a Master's Degree or its equivalent. Moreover, the survey data revealed that approximately nine out of ten respondents held the ASHA Certificate of Clinical Competence. Even though the study was limited to individuals with extensive academic and clinical backgrounds, the majority had not completed formal coursework with subject matter relating to test instruments used in the evaluation of Spanish-speaking students. Thus, the data indicate that college and university training programs in speech-language pathology have not been providing their students with the competencies necessary for roles in the assessment of Spanish-speaking children.

Neither a Master's Degree nor the ASHA Certificate of Clinical Competence are requirements for positions as speech-language pathologists in the public schools. Thus, lack of training relating to the assessment of Spanish-speaking children may be an even more severe problem among speech-language pathologists who do not hold graduate de-

grees.

The shortage of personnel qualified to work with Spanish-speaking students has made it difficult to conduct evaluations and to provide speech and language therapy in Spanish. Speech-language pathologists who were able to ensure that speech and language testing was conducted in Spanish were not always able to offer speech and language therapy in Spanish at their schools. Thus, Spanish-dominant children who were identified as handicapped did not necessarily receive speech and language therapy in Spanish. The manner in which instructional services have been provided to Spanish-speaking children with speech and language handicaps was beyond the scope of this study.

If speech-language pathologists are to comply with Public Law 94-142, appropriate test instruments and qualified assessment personnel must be available to them. Efforts were being made in Los Angeles County to develop new tests for use with the local Spanish-speaking population. Moreover, monolingual speech-language pathologists often used bilingual personnel to administer tests in Spanish during speech and language evaluations. The problems encountered by speech-language pathologists in using test instruments and personnel in assessment must be dealt with.

Use of Test Instruments with Spanish-Speaking Students

Published articulation and language tests designed for Spanish-speaking children, locally developed test instru-

ments, conversational speech samples, and interview techniques (e.g., interviews with the child's teacher) were among the procedures used in Los Angeles County to collect the assessment data.

Although use of a variety of test instruments was reported, almost half of the public school speech-language pathologists in the sample indicated that screening procedures were not available at their schools to identify Spanish-speaking students who might be in need of speech and language therapy. Screening tests were most often used in school settings where Hispanic enrollment was high. Approximately one out of four speech-language pathologists in schools where Hispanics constituted over 40% of the student enrollment, however, reported that speech and language screening tests were not administered in Spanish to identify children with possible speech and language handicaps. Thus, the possibility exists that many communicatively handicapped Spanish-speaking children are not being identified.

Screening tests can serve an important function in identifying possible candidates for speech and language therapy programs. When children speak only one language, many teachers have little difficulty identifying those individuals who should be evaluated for possible speech and/or language handicaps. When two languages are spoken, however, one is faced with the problem of distinguishing

speech and language differences typically observed in bilingual student populations from true speech and language handicaps. Thus, many classroom teachers may have difficulty identifying those bilingual children who should be referred for testing. By using screening test data in conjunction with information obtained from the classroom teacher, the likelihood is increased that children will be identified who should be evaluated for possible speech and language handicaps.

The limited availability of speech and language therapy in Spanish may be one reason for the low percentage of survey respondents reporting the use of Spanish screening tests to identify possible candidates for speech and language therapy. Only 16.99% of the public school speech-language pathologists who returned the survey reported that speech and language therapy was available in Spanish at their schools. Even in schools with over 40% Hispanic student enrollment, only one out of three speech-language pathologists reported that speech and language therapy could be provided in Spanish. The Education for All Handicapped Children Act of 1975 (Public Law 94-142) guarantees all handicapped children the right to receive a free appropriate public education, and this right must not be denied to Spanish-speaking children. Thus, speech and language screening, evaluation, and remediation should be available to all children on an equal basis.

Approximately three out of four speech-language pathologists in the sample indicated that speech and language evaluations could be ensured in Spanish when Spanish-dominant children were referred for testing. The speech-language pathologists who were not able to ensure testing in the dominant language generally described the shortage of qualified assessment personnel as the reason that testing could not be guaranteed. Not one respondent described lack of access to appropriate test instruments as the reason that testing could not be ensured. Moreover, no respondents indicated that their schools resisted efforts to ensure that Spanish-speaking children were tested in their dominant language.

The survey data revealed that some speech-language pathologists had experienced difficulties in their efforts to ensure that Spanish-dominant children were tested in Spanish. These difficulties were found to result, in large part, from the limited availability of qualified personnel to administer speech and language tests in Spanish rather than from discriminatory assessment practices. Thus, efforts need to be made to ensure that monolingual speech-language pathologists have access to the personnel needed to appropriately evaluate Spanish-dominant children in Spanish.

Evidence that published Spanish language assessment instruments were failing to provide many speech-language pathologists with sufficient information to identify Span-

ish-speaking children with language handicaps was found in the current research. The Test for Auditory Comprehension of Language (Spanish version) was the only test judged as adequate for handicap identification by 70% or more of the respondents reporting use of the test. Few respondents, however, expressed dissatisfaction with any of the articulation tests used with Spanish-speaking students.

It is interesting that the Spanish version of the Test for Auditory Comprehension of Language was rated as sufficient for the identification of Spanish-speaking children with language handicaps by a higher percentage of respondents than any of the other tests that were commercially available at the time of this study. This test was originally published in English and was standardized on a population consisting primarily of Anglo children. The instrument was designed for use with children between three and seven years of age and assesses only comprehension. The validity of the test has been questioned in the literature (Day, McCollum, Cieslak, and Erickson, 1981). Inaccuracies in the Spanish translation of the test have also been described (Rueda and Perozzi, 1977).

The current study revealed that efforts were being made in Los Angeles County to develop tests that would more adequately meet the needs of the local Spanish-speaking population. The recent development of Pruebas de Expresion Oral y Percepcion de la Lengua Española (PEOPLE), a stand-

ardized test of receptive and expressive language abilities, indicates that speech-language pathologists in Los Angeles County have recognized the need for better assessment instruments, and that steps have been taken to remedy the situation. PEOPLE was developed in Los Angeles County specifically for use in the identification of Spanish-speaking children with language handicaps (Mares, 1980). Research is needed to examine the validity of this test instrument.

The data obtained from the survey revealed that the assessment of Spanish-dominant children has often included an evaluation of fluency in the English language. Many of the tests reported in use were standardized on Anglo student populations. Although these tests can provide useful information regarding speech and language development in English, it is important for speech-language pathologists to realize that Hispanic students may perform very differently from Anglo students because of differences in their language backgrounds and cultural experiences.

Speech-language pathologists working in schools where speech and language evaluations had been conducted in Spanish were asked to indicate whether or not conversational speech samples had ever been used in the assessment of Spanish-speaking students. Over 40% of the speech-language pathologists indicated that samples of conversational speech in Spanish had not been used. The shortage of assessment personnel who speak Spanish fluently enough to

transcribe and analyze speech samples may be a factor contributing to the limited use of conversational speech samples in the assessment of Spanish-speaking children. Since it is important to evaluate the child's natural communicative behavior, conversational speech samples should be an essential component of the assessment battery.

The use of conversational speech samples and other informal methods of assessment makes it possible to focus the evaluation on the child's functional use of language. Assessment data derived solely from standardized tests is likely to provide a very limited picture of the child's language capabilities. The importance of including a variety of nonstandardized measures in the assessment battery was emphasized by Leonard, Prutting, Perozzi, and Berkley (1978):

While it is more convenient to rely exclusively on standardized tests, it is difficult to defend speech-language pathologists' roles in language assessment if assessment consists merely of deriving scores, language ages, or percentiles. Presumably, the reason why speech-language pathologists are best equipped to assess the communicative skills of language-impaired children is that we have also been trained in matters involving children's development and use of behaviors important to communication. It is this training that is called on in the adoption of nonstandardized measures; and it is this training that we need to apply if we are to serve language-impaired children adequately, and demonstrate that we have an important service to offer in the area of language assessment. (p. 376)

The fact that many survey respondents were dissatisfied with available tests indicates that improved assessment instruments are needed. Speech-language pathologists, how-

ever, will not have to wait for the development of improved test instruments before they can effectively evaluate Spanish-speaking students. If one is familiar with the child's language and has studied the literature on bilingual language development, it is possible to assess language behavior without formal tests. Speech-language pathologists must become familiar with the problems that are typical of children learning two language so that they can distinguish these problems from those that are indicative of a speech and/or language handicap. Juarez (1981) reported that bilingual individuals can be evaluated without standardized tests if systematic procedures are used to observe and describe language behavior. The child's language behavior is then evaluated in terms of how it compares to that of others in the community and to that required within the school curriculum. Rather than using language age scores or percentiles as a measure of language development, this approach focuses on the analysis of specific features of the child's language behavior and on the identification of specific problems that may be interfering with effective communication.

Roles and Responsibilities of Speech-Language Pathologists

Based on the data obtained in the current study, it is unrealistic to expect that all referred Spanish-speaking students can be assessed by speech-language pathologists who speak Spanish as their native language. Since only

one of the 15⁴ speech-language pathologists working in public school speech and language therapy programs was Hispanic, it is likely that there are few speech-language pathologists who speak Spanish as their native language. Thus, speech-language pathologists who acquired Spanish as a second language and/or bilingual personnel working in positions other than speech and language therapy must play a role in the collection of the assessment data.

In Los Angeles County, speech-language pathologists had been involved in evaluating both the English and Spanish fluency of Spanish-dominant students. In schools where speech and language evaluations had been conducted in Spanish, 40.46% of the speech-language pathologists reported that they had been directly involved in administering tests in Spanish to Spanish-speaking students. Some of these individuals, however, did not even have a sufficient knowledge of Spanish to comprehend the basic Spanish vocabulary words listed on Question 8 of the survey.

The Code of Ethics of the American Speech-Language-Hearing Association, presented in Asha (1982), specifies that it is unethical for individuals to engage in services for which they have not been properly prepared. Thus, speech-language pathologists are in violation of the Code of Ethics if they administer tests that they are not qualified to administer.

The survey data revealed that there were speech-language pathologists with limited Spanish fluency who had

been involved in administering initial screening measures in Spanish when Spanish-speaking students were referred for testing. A speech-language pathologist with limited proficiency in Spanish may, in many cases, be able to conduct an initial screening of children's knowledge and/or use of basic Spanish vocabulary. An initial informal "screening" by the resident speech-language pathologist can provide information that will be helpful in determining what special materials and human resources might be needed to evaluate the child's proficiency in the Spanish language. In no case, however, is it ethical for speech-language pathologists to administer speech and language tests if they lack the fluency necessary to comprehend the test items and to administer the test appropriately. Involvement of a fluent Spanish-speaker in the assessment process will most likely result in a more valid assessment of the child's speech and language behavior.

Whether or not speech-language pathologists with limited fluency in Spanish had conducted evaluations and identified students as handicapped without assistance from fluent Spanish-speaking personnel could not be determined from the survey data. Glass (1979) emphasized that bilingual children must be tested by individuals who speak their language. If speech-language pathologists try to provide services in the child's native language with little knowledge of that language, they are in danger of violating recent federal legislation (e.g., Public Law 94-142).

Use of Bilingual Personnel Other than Speech-
Language Pathologists in Assessment

The survey data revealed that personnel working in a variety of positions had participated in speech and language evaluations conducted with Spanish-speaking students. Classroom teachers, classroom instructional aides, specially trained speech aides, teachers of English as a second language, and school psychologists were among those who had been involved in the testing of children who spoke Spanish. Moreover, the personnel used had often been native speakers of Spanish.

The use of bilingual paraprofessionals in speech and language evaluations conducted with bilingual students has been recommended in the literature (Glass, 1979). Comments made by survey respondents indicated that instructional aides and other supportive personnel had been used successfully in assessment. Some respondents, however, reported that the assessment personnel available to them lacked the educational background and/or training necessary to effectively evaluate Spanish-speaking students. Fluency in Spanish is not the only factor that must be considered in selecting personnel to be used in the testing of Spanish-speaking students. Assessment personnel must also demonstrate evidence of the competencies necessary to administer tests appropriately.

School districts that do not have bilingual speech-

language pathologists may, in many cases, have no other alternative than to make use of instructional aides and other locally available personnel in assessment. When these individuals are involved in testing, the speech-language pathologist has an important ethical responsibility in ensuring that the appropriate training is provided.

Training of Speech-Language Pathologists for Roles
in the Assessment of Spanish-Speaking Students

The finding that most public school speech-language pathologists had not completed coursework covering Spanish speech and language assessment instruments indicates that many individuals may be entering the profession of speech-language pathology with little or no knowledge of the assessment materials available for Spanish-speaking populations. The data also provided evidence that the large majority of speech-language pathologists did not have sufficient fluency in Spanish to transcribe and analyze conversational speech samples.

Lack of fluency in Spanish and insufficient training in procedures for assessing Spanish-speaking students was also found to be widespread among survey respondents working in settings other than public school speech and language therapy programs. Thus, the availability of fluent Spanish-speaking members of the profession who have the training necessary to assist monolingual speech-language pathologists in assessment appears to be quite limited in

all work settings.

To alleviate the problems caused by the shortage of bilingual speech-language pathologists with formal training relating to the use of test instruments with Spanish-speaking populations, local school districts must provide opportunities for their personnel to attend training programs. The fact that the majority of public school speech-language pathologists in this study had attended workshops relating to the identification of Spanish-speaking children with speech and language handicaps indicates that many school districts are providing such opportunities.

Speech-language pathologists involved in testing the Spanish-speaking child's proficiency in the English language must have the training necessary to interpret the test findings. To conduct such an evaluation effectively, one must be able to distinguish between difficulties commonly observed among individuals learning English as a second language and difficulties that may be indicative of a speech and/or language handicap. In evaluating the Spanish-speaking child's articulation of English words, for example, one must be aware that errors will often be observed on sounds that do not occur within the Spanish language.

Public school speech-language pathologists were asked to indicate whether or not they could identify English articulation errors commonly produced by individuals from homes where Spanish was spoken. The fact that 80.52%

of the respondents reported having this knowledge suggests that most speech-language pathologists have an awareness of some of the difficulties that Spanish-speakers typically demonstrate when pronouncing English words. Knowledge of the articulation problems typically observed among children from homes where Spanish is spoken is important to ensure that these children are not inappropriately diagnosed as handicapped.

Glass (1979) emphasized that speech-language pathologists working with bilingual students should become familiar with their culture and with some of the basic phonological, semantic, and morpho-syntactic rules in their language. Thus, in assessing the Spanish-speaking child, it is important that speech-language pathologists have a basic knowledge of the articulation patterns and language differences that are most commonly observed when Spanish-speaking children learn English as a second language. Spanish-dominant children who demonstrate difficulty producing English speech sounds must not be viewed as handicapped if these speech sounds do not occur in the Spanish language. Moreover, Spanish-dominant children must not be considered to have a handicap if difficulties with vocabulary and/or syntax are observed only in English.

The data obtained in this research suggest that training programs in speech-language pathology have not adequately prepared speech-language pathologists for roles in the assessment of Spanish-speaking students. Academic

training programs should provide information regarding assessment procedures used with Spanish-speaking students so that speech-language pathologists will be able to correctly identify children with speech and language handicaps and develop appropriate remedial programs.

Assessment Guidelines

A comprehensive set of assessment guidelines was developed by the researcher based on the findings of this study and a review of the previous literature. The guidelines consist of detailed recommendations for the use of test instruments and personnel in conducting speech and language evaluations with Spanish-speaking students. Also included in the guidelines are recommendations for the training of personnel involved in the testing of Spanish-speaking students.

Researchers have emphasized the need for qualified assessment personnel and more adequate assessment instruments for use in the evaluation of Spanish-speaking students. The shortage of qualified assessment personnel and the inadequacies of available assessment instruments have made it difficult for speech-language pathologists to evaluate Spanish-speaking students.

Although the results of this study indicated that most speech-language pathologists could ensure that Spanish-dominant children were tested in Spanish, serious questions must be raised regarding the validity of the test instruments

that had been used. Moreover, since most speech-language pathologists lacked formal training relating to Spanish speech and language assessment instruments, these individuals may not have, in many cases, the competencies necessary to ensure that the appropriate assessment tools were used and that the results were interpreted correctly. There is a definite need for guidelines that can be used to develop improved assessment practices.

The guidelines presented in this chapter are based on a pragmatic model of the communication process. Following a description of this model as it is used in the assessment of bilingual student populations, guidelines will be presented relating to (1) the use of test instruments in assessment, (2) the roles and responsibilities of speech-language pathologists in the assessment of Spanish-speaking students, (3) the use of bilingual personnel other than speech-language pathologists in assessment, and (4) the training of speech-language pathologists in skills necessary for the assessment of children who speak Spanish.

Conceptual Model for the Assessment Guidelines

The assessment guidelines are based on the concept that a child's communicative competence must be assessed within a pragmatic framework. Pragmatics, the study of language as it is used in context, has received much attention in the literature on language development over the past decade (Lucas, 1980; Simon, 1981) and has recent-

ly been discussed in terms of its implications for the oral language assessment of bilingual student populations (Omark, 1981b; Sridhar, 1981).

Utterances produced by a child occur within specific contexts and are used to express various kinds of functions (e.g., to request information, to inform, to warn, etc.) within those contexts. In assessing the Spanish-speaking child's oral communication, one must do more than simply test the child's mastery of specific sounds, words, and grammatical structures. One must consider how language is used by the child to convey meaning in a variety of speaking contexts. When a pragmatic model of communication is used in assessment, language is viewed in terms of interactions between a speaker and listener in a social context. The goal of assessment, therefore, is to describe the child's language as it is used for communicative purposes (Simon, 1981).

It is a common practice for speech-language pathologists to use highly structured standardized tests to identify children with speech and language handicaps. These tests generally provide a quantitative measure of the child's performance on discrete structural components of the language but fail to consider the effectiveness of the child's communication during natural speaking acts. Based on a review of language tests used with bilingual student populations, Day, McCollum, Cieslak, and Erickson (1981) reported that "discrete point tests may not give

an evaluator adequate information even from a structural point of view" (p. 130).

Within a pragmatic assessment model, the child's communication is evaluated during natural speaking acts. The advantages of using this model in language assessment were discussed by Omark (1981b):

An investigation of speech acts is designed to move the tester closer to the child's real world— to see what the child wants to do and is capable of doing. No a priori criteria are established for success or failure, but instead the observer can investigate the child's ongoing attempts to communicate. These attempts can then be compared with the capabilities of others from the child's own set of peers rather than with some set of hypothetical others who, in fact, bear little relationship to the child being observed (p. 291).

By using speech acts as the level of analysis, Omark emphasized that one is able to assess children's oral communication as they function within their experiential world. When such an analysis is used, it is possible to compare a particular child's oral communication with that of peers in naturalistic settings.

When a pragmatic assessment model is used, there is no need to eliminate all formal tests from use in the evaluation. Tests can provide clues that will be useful in identifying possible problems that the child may be experiencing during natural speaking acts (e.g., difficulty communicating because of limited knowledge of basic vocabulary). These tests, however, should always be used in conjunction with samples of the child's natural communication. If one is interested in assessing oral

communication, one must examine how the child actually uses language to convey meaning in real life situations. Children should be identified as "handicapped" only if evidence has been obtained that their oral communication calls attention to itself during natural speaking acts.

Guidelines for Using Test Instruments in Identification

When a pragmatic model of the communication process is used in assessment, the speech-language pathologist's goal is to identify specific problems in children's verbal interactions that reduce the effectiveness of communication within their natural speaking environment. In interpreting the assessment data, the cultural and linguistic experience background of the child must be considered. Children who speak a nonstandard dialect of Spanish must not be viewed as "handicapped" if they are able to communicate effectively within that dialect. Moreover, children should not be considered to have speech and/or language handicaps if the only problems observed are those that are typical of children learning two languages (e.g., problems resulting from language interference).

The administration of speech and language screening tests to all children at school entrance is recommended. The purpose of these tests is to identify children who may be in need of speech and language therapy. Children who do not pass the screening should be considered for a complete speech and language evaluation.

Recommended guidelines for the use of speech and language screening tests with Spanish-speaking students are as follows:

1. The screening tests should be designed to identify children with possible articulation, language, voice, and stuttering problems.
2. The screening tests should include measures of both English and Spanish fluency. Tasks designed to measure English fluency may be eliminated in cases where it is known that the child has had little or no exposure to the English language.
3. The screening tests should include a measure of the child's use of language during conversation.
4. The screening tests should include measures of the child's mastery of specific structural aspects of the language (e.g., knowledge of particular grammatical structures).
5. The screening tests should be administered by a Spanish-speaking speech-language pathologist or by Spanish-speaking personnel who have been specifically trained to conduct the screening.

Speech-language pathologists working in schools where language dominance tests are administered to Spanish-speaking students should make an effort to coordinate the speech and language screening with the language dominance testing. Language dominance tests provide information that can be useful in identifying children with possible

language handicaps. These tests, however, are not designed specifically to identify children with handicaps. Personnel involved in the administration of language dominance tests could, if properly trained, participate in the screening for articulation, language, voice, and stuttering handicaps by recording problems observed in these areas during the language dominance testing and/or by administering additional screening measures to the children being assessed.

Complete diagnostic evaluations should be conducted with children who perform poorly on the screening tests and with children who are referred for speech and language testing. In identifying Spanish-speaking children with speech and language handicaps, it is important that the individual's performance be evaluated in terms of how it compares to that of others who have had similar language experiences. A child should be considered to have a speech and/or language handicap only if the communicative behaviors observed are uncommon among peers who have had similar exposure to the language.

Recommended guidelines for the use of standardized tests and other assessment measures (e.g., conversational language samples) are the following:

1. The identification of Spanish-speaking children with speech and language handicaps should not be based solely on scores derived from standardized tests. Burt, Dulay, and Hernandez-Chavez (1978) reported that length

and type of exposure to the language must be incorporated into age and grade norms if these norms are to be meaningful. Norms including these crucial variables would require much research and are not available at the present time.

A major problem with standardized tests is that they discriminate against children who speak a dialect different from that used on the test. Thus, the extent to which the child's language background is similar to that of children in the standardization sample needs to be considered (Omark, 1981a).

Some children may perform poorly on standardized tests because of the way in which the tasks are constructed. Thus, difficulties may be observed on specific language structures when a standardized test is administered even though these same language structures cause the child no difficulty during spontaneous speech (Leonard, Prutting, Perozzi, and Berkley, 1978).

2. Test content should be relevant to the culture and experience background of the children being assessed. Efforts should be made to modify test items to reflect the local dialect and to obtain local norms when standardized tests are used with student populations different from those on which the tests were developed. A child who is unfamiliar with the dialect in which a test is written is likely to achieve a lower score than a child who is familiar with that dialect, even though both children may demonstrate equal proficiency in the dialect spoken within the

local community. The development of local norms will not, in itself, correct for this problem. It is therefore necessary to ensure that the vocabulary used in the test is representative of the dialect spoken in the community where the test is used. Test users should consult with test authors and publishers prior to making modifications in the contents of any copyrighted assessment instruments. Procedures for obtaining local norms and modifying test content to reflect the local dialect have been described in detail by Watson, Omark, Grouell, and Heller (1980).

3. The assessment of Spanish-speaking children's speech and language behavior should always include measures of language usage during natural speaking activities.

Standardized tests are generally restricted to the assessment of specific structural components of the language; the child's functional usage of language for communication purposes also needs to be considered (Erickson, 1981). To obtain information regarding the child's functional use of language, conversational speech samples should be tape-recorded and analyzed. The speech-language pathologist's task is to identify specific aspects of the child's communication that are indicative of a speech and/or language handicap. Additional information regarding the child's functional use of language can be obtained from questionnaires completed by the classroom teacher and/or parent. Techniques of naturalistic observation that can be used to obtain data regarding children's competence in oral com-

munication have been described by Omark (1981b). Omark also presents sample questionnaires for parents, teachers, and other observers to complete which provide information regarding the child's pragmatic use of language in various speaking contexts.

4. Children who have been exposed to both English and Spanish should be tested in both languages. Public Law 94-142 mandates that testing must be conducted in the dominant language. Testing only in the dominant language, however, will often not provide sufficient information to determine whether or not a speech or language handicap is present. A Spanish-dominant child may know many words in English that are not known in Spanish because of mixed exposure to the two languages. The influence that simultaneous exposure to English and Spanish has on the child's proficiency in the dominant language must be considered in the interpretation of test findings.

5. Tests used to compare children's relative fluency in English and Spanish must be designed to reflect the structural differences between English and Spanish. A Spanish translation of an English test of syntax, for example, is not likely to be equivalent in difficulty to the English version because many of the structural distinctions made in English are different from those made in Spanish (Burt, Dulay and Hernandez-Chavez, 1978). Thus, a test with demonstrated validity when administered in English is not necessarily valid when translated into

the Spanish language.

6. The extent to which English and Spanish are used in the child's environment should be considered in the interpretation of test results. Knowledge of the extent to which the two languages are used in the child's home environment, along with information about who uses each language, helps clarify the test findings (Burt, Dulay, and Hernandez-Chavez, 1978). A child who has been exposed only to Spanish in the home would be expected to show greater fluency in Spanish than a classmate who comes from a home where English is used most of the time. Children who demonstrate communication difficulties resulting solely from lack of sufficient exposure to the language must not be considered handicapped.

Guidelines Regarding the Roles and Responsibilities of Speech-Language Pathologists in Assessment

Both monolingual and bilingual speech-language pathologists can play an important leadership role in the development of procedures to ensure that referred Spanish-speaking children are appropriately assessed and that those with speech and/or language handicaps are identified. The speech-language pathologist should serve as chairperson in a team approach to assessment. The assessment team should consist of the speech-language pathologist, classroom teacher, parent, and any other personnel who have been involved in the collection and/or review of the assessment data.

Recommended guidelines relating to the roles and responsibilities of speech-language pathologists in the assessment of Spanish-speaking students are the following:

1. The speech-language pathologist should be involved only in the administration of test instruments for which he/she has the necessary qualifications. English articulation and language tests can be administered by monolingual speech-language pathologists if steps are taken to ensure that the child understands the task instructions. It is recommended that a fluent Spanish speaker be present during testing in English to assist monolingual speech-language pathologists in the presentation of task instructions.

The extent to which bilingual speech-language pathologists can participate directly in the administration of Spanish articulation and language tests will depend on their level of proficiency in the Spanish language. The administration and scoring of a vocabulary measure in which the child is asked to name pictures requires a lower level of proficiency in Spanish than does a measure in which conversational speech samples are transcribed and analyzed. In situations where a speech-language pathologist lacks sufficient fluency in Spanish to understand the vocabulary used on a particular test and/or lacks the training necessary to administer that test appropriately, the assistance of assessment personnel with the appropriate qualifications should be obtained.

2. The speech-language pathologist should be involved in decision-making regarding the formal and informal test instruments that will be used in the evaluation. The speech-language pathologist is responsible for ensuring that the testing is conducted in a nondiscriminatory manner and that all assessment procedures mandated by Public Law 94-142 are carried out.

3. The speech-language pathologist should be involved in the development of procedures for obtaining assessment data from parents, teachers, and other individuals who have relevant information to share. Decisions regarding the specific types of information that need to be obtained from individuals in the child's environment should be made by the speech-language pathologist.

4. The speech-language pathologist should be involved in the development of procedures for collecting and analyzing samples of the child's conversational speech. The specific contexts in which the child's oral communication will be observed should be determined by the speech-language pathologist.

5. The speech-language pathologist should be involved in the selection and training of personnel who will participate in the administration of speech and/or language tests. The speech-language pathologist is responsible for ensuring that all personnel involved in speech and language testing are appropriately qualified.

6. The speech-language pathologist should be involved in the review of all test data obtained during evaluations with Spanish-speaking students. Following the review of the assessment data, the speech-language pathologist should consult with all members of the assessment team so that appropriate recommendations can be made for the student. The speech-language pathologist should be given the responsibility for determining if sufficient information has been obtained to indicate the presence or absence of a speech and/or language handicap. Thus, no child should be placed in a speech and language therapy program without the approval of the speech-language pathologist.

Guidelines for Using Bilingual Personnel Other than Speech-Language Pathologists in Assessment

Personnel other than speech-language pathologists who are used in conducting speech and language evaluations with Spanish-speaking students must be carefully selected, trained, and supervised to ensure that all tests are administered and scored correctly. The ASHA-adopted "Guidelines for the employment and utilization of supportive personnel" (1981) include the following recommendations:

1. Personnel should have a high school diploma or its equivalent.
2. Personnel should have the communication skills necessary for the tasks assigned.
3. Personnel should have the ability to relate to the population of clients being served.

These ASHA-adopted guidelines have relevance for the selection of bilingual personnel used in assessment even though they were not designed specifically for this purpose. Therefore, guidelines for the selection of bilingual assessment personnel were developed which incorporated the ASHA-adopted guidelines.

Recommended guidelines for selecting bilingual personnel to participate in administering Spanish speech and language tests to Spanish-speaking children are the following:

1. Bilingual assessment personnel must have the educational background necessary to administer tests appropriately to Spanish-speaking children. When individuals with less than a high school education must be used, their qualifications must be carefully examined. Assessment personnel must have the basic skills in reading necessary to read the test stimuli to the child. They must also have the skills necessary to accurately record the child's responses.

2. Bilingual assessment personnel should have the fluency in Spanish necessary to appropriately assess the child's speech and language skills. Assessment personnel must have the fluency in Spanish necessary to communicate effectively with the child during the evaluation.

3. Bilingual assessment personnel should have the ability to relate to the Hispanic culture. Assessment personnel must be able to establish rapport with the

child so that a valid measure of his/her speech and language behavior can be obtained.

Specific procedures should be developed for training bilingual personnel for roles in the speech and language assessment of Spanish-speaking students. The responsibility for developing the training program and for supervising the training activities should be that of the speech-language pathologist. Fluent Spanish-speakers who have had experience in the administration of tests to Spanish-speaking students will be needed to assist monolingual speech-language pathologists in the presentation of the training activities. The nature of the training procedures will vary depending on the particular needs of the school setting in which testing is conducted.

Recommended guidelines for the training of bilingual assessment personnel are the following:

1. The training program should provide general information regarding the nature of speech and language handicaps and the use of test instruments in assessment.

2. The training program should provide detailed information regarding the procedures for administering and scoring each of the tests that will be used in the evaluation of Spanish-speaking students.

3. The training program should provide opportunities for the participants to practice administering and scoring each of the tests. The administration of tests should be supervised by the speech-language pathologist and by any

other individuals involved in presenting the training activities.

4. The training program should provide an overview of current laws and professional ethics with special reference to issues in the assessment of bilingual student populations.

Following completion of the training program, it is important that the speech-language pathologist implement procedures to ensure that appropriate supervision is provided for personnel selected to participate in the testing of Spanish-speaking students. The guidelines presented below relate to the roles and responsibilities of individuals other than speech-language pathologists who participate in the speech and language testing of Spanish-speaking students:

1. Personnel selected by speech-language pathologists to assess Spanish-speaking students should be assigned to engage only in those assessment activities for which training has been provided.

2. Personnel selected by speech-language pathologists to assess Spanish-speaking students should engage in assessment activities only with those students who have been assigned to them directly by the speech-language pathologist. All student referrals must be approved by the speech-language pathologist before testing is conducted.

3. Personnel selected by speech-language pathologists to assess Spanish-speaking students should not be given the

responsibility for making decisions regarding students' instructional needs. Diagnostic statements that will be used in educational decision-making must be made by an individual with an extensive background in speech-language pathology. Thus, only speech-language pathologists are qualified to make such statements. Personnel selected by speech-language pathologists to participate in the assessment of Spanish-speaking students, however, should feel free to share their impressions regarding students' strengths and weaknesses with the speech-language pathologist.

When classroom instructional aides and other supportive personnel participate in the assessment of Spanish-speaking students, the speech-language pathologist is responsible for ensuring that the assessment procedures are carried out appropriately. The Code of Ethics of the American Speech-Language-Hearing Association specifies that speech-language pathologists must not offer clinical services using supportive personnel for whom they do not assume full responsibility. Thus, speech-language pathologists must recognize that they have important roles in the development of procedures to ensure that paraprofessionals maintain a high level of competence in their assigned duties.

Guidelines for Training Speech-Language Pathologists
To Assess Spanish-Speaking Students

Training programs are needed to provide speech-language pathologists with the competencies necessary to conduct evaluations with Spanish-speaking students and to interpret the test findings. College and university degree programs in speech-language pathology should be directly involved in the development of training programs. Local school districts must recognize the need for in-service programs and workshops designed to provide their speech-language pathologists with the knowledge and training necessary to ensure that Spanish-speaking students are appropriately assessed.

College and university programs in speech-language pathology should offer coursework relating specifically to the assessment, identification, and remediation of speech and language handicaps in bilingual, bicultural populations. The coursework should include content designed to provide students with competencies relating to the identification of Spanish-speaking children with speech and language handicaps.

It is recommended that the guidelines below be used in the development of course content relating to the assessment of Spanish-speaking students:

1. Course content should provide the student with information regarding Spanish speech and language assessment instruments and their use in the identification of

Spanish-speaking children with speech and language handicaps. Information regarding test construction, standardization, test reliability, and test validity should be provided in the coursework, along with a discussion of the relevant research.

2. Course content should provide the student with information regarding the effects that cultural and linguistic differences have on the test performance of Spanish-speaking students. A discussion of differences between the Anglo and Hispanic cultures that are relevant to assessment should be included in the course.

3. Course content should provide the student with knowledge of procedures for ensuring that test instruments are culturally and linguistically appropriate for the student population being assessed. Procedures for constructing new tests, modifying existing tests, and developing local norms should be included in the course content.

4. Course content should provide the student with information regarding procedures for observing, recording, and analyzing speech and language data obtained from Spanish-speaking students in naturalistic settings. Coursework should include a discussion of procedures for evaluating the structural aspects of language and the child's functional use of language for communication purposes. Informal pragmatic techniques for the observa-

tional analysis of the child's natural communication, as described by Omark (1981b), should be covered within the course content.

5. Course content should provide the student with an understanding of the basic structural differences between English and Spanish, and the effect that these differences have on the bilingual child's speech and language behavior. The coursework should include discussion of specific problems that children are likely to experience when learning two languages simultaneously and when learning English as a second language.

6. Course content should provide the student with an understanding of the factors that must be considered in distinguishing speech and language differences from speech and language handicaps. The coursework should create an awareness that language proficiency, as measured by tests, is influenced by the extent to which the child has been exposed to English and Spanish and by the type of language exposure that has been experienced.

7. Course content should provide the student with information regarding procedures for training bilingual instructional aides and other supportive personnel for roles in the speech and language assessment of Spanish-speaking students. Information regarding the speech-language pathologist's legal and ethical responsibilities in using supportive personnel should be provided in the coursework.

8. Course content should provide the student with information regarding procedures for developing and using a team approach in conducting evaluations with Spanish-speaking students. The coursework should cover methods for working with classroom teachers, parents, bilingual classroom aides, etc. in conducting assessments and in interpreting test findings.

9. Course content should provide the student with an understanding of current laws affecting special education and the implications that these laws have for the assessment of Spanish-speaking students.

It is unlikely that college and university training programs will be able to meet the needs of all practicing speech-language pathologists. Therefore, local school districts must provide opportunities for their speech-language pathologists to attend training programs relating to the speech and language assessment of Spanish-speaking students. Training programs provided by local school districts can be helpful in providing individuals with the competencies necessary to effectively evaluate these students.

Recommended guidelines for developing local workshops on bilingual speech and language assessment are the following:

1. A needs assessment should be conducted to identify problems being experienced by speech-language pathologists in conducting evaluations with Spanish-speaking students.

Kaufman (1972) described needs assessment as a discrepancy

analysis— the identification and documentation of differences between the current condition and the desired condition. In conducting a needs assessment, all elements of the context in which change is to occur must be included. Thus, the cultural and linguistic background of the student population being served, the procedures and materials used in assessment, the personnel involved in conducting the testing, and current legal requirements regarding the oral language assessment of Spanish-speaking students are among the factors that must be considered.

2. Speech-language pathologists should be directly involved in developing the competencies that will be emphasized in district workshops on the speech and language assessment of Spanish-speaking children. Information from the needs assessment should be used to develop specific instructional objectives for the workshops.

3. Speech-language pathologists and other individuals who have had direct experience in conducting speech and language evaluations with Spanish-speaking students should be responsible for presenting the workshops.

4. Workshops covering a variety of topics relevant to the speech and language assessment of Spanish-speaking children should be offered. It is unlikely that a single workshop will be sufficient to meet the varying needs of practicing speech-language pathologists. Moreover, the content of district workshops should be responsive to changing local needs. Needs assessment should be an ongoing pro-

cess to ensure that the content of the workshops is relevant to current district needs.

Local school districts should work closely with the community and with institutions of higher learning in the development of programs for training speech-language pathologists. Colleges and universities can provide an important service to school districts by developing programs for training speech-language pathologists for roles as specialists in working with bilingual individuals with speech and language handicaps. Texas Christian University is one institution that already has such a program (Juarez, 1981).

Knowledge of a foreign language is not required for public school speech and language therapy credentials or for the ASHA Certificate of Clinical Competence. Educational institutions with programs designed to train speech-language pathologists should encourage (or possibly require) completion of coursework in a foreign language. Training in a foreign language will give students a better understanding of the communication problems experienced by bilingual individuals, in addition to providing them with skills that may prove to be of value in assessment or remediation.

The American Speech-Language-Hearing Association should also work closely with public school programs in matters relating to the training of speech-language pathologists. Completion of coursework specifically related to issues in the assessment and remediation of the speech and language

problems of bilingual students is currently not a requirement for the ASHA Certificate of Clinical Competence. A careful review of current training requirements for this Certificate appears to be necessary. Speech-language pathologists must be trained so that they can meet the needs of bilingual student populations.

The guidelines that have been presented in this chapter are meant to be used as recommendations rather than as a rigid prescription. Thus, these guidelines should be adapted as necessary to meet the needs of local school districts. The nature of the student population being served, the assessment personnel available locally, district finances, and a variety of other factors will undoubtedly have an impact on how the guidelines are implemented.

CHAPTER VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The current research was conducted to investigate issues relevant to the identification of Spanish-speaking children with speech and language handicaps and to develop guidelines for more effective practice. This chapter presents (1) a summary of the research procedures, results, and guidelines, (2) the conclusions reached, and (3) specific recommendations for further research.

The specific objectives of this study were (1) to identify the procedures used in speech and language therapy programs to assess Spanish-speaking students, (2) to determine the extent to which speech-language pathologists are qualified to conduct evaluations with Spanish-speaking students, and (3) to develop a comprehensive set of assessment guidelines.

The assessment guidelines were developed based on information obtained from the survey instrument and based on an extensive review of the literature. The guidelines consist of specific recommendations for the use of test instruments and assessment personnel in the identification of Spanish-speaking children with speech and language handicaps. Also included in the guidelines are recommendations for the training of assessment personnel.

Summary of Procedures

A survey instrument developed by the researcher was used in this study to identify procedures used in conducting speech and language evaluations with Spanish-speaking students. The survey was mailed to 408 individuals selected from the 1980 membership directory of the American Speech-Language-Hearing Association (ASHA) and the 1981 supplement to this directory. Two mailings resulted in 285 returns, a return rate of 69.85%. Forty-four of the returned surveys contained unusable information; consequently, the data were based on the responses of 241 (59.07%) of the 408 individuals who were mailed copies of the survey.

A total of 154 of the survey respondents were employed in public school speech and language therapy programs. The remaining 87 respondents were working in full-day special education classrooms, private practice, and in various other clinical or educational settings.

Survey respondents working in public school speech and language therapy programs were divided into four groups based on Hispanic student enrollment in the school population served. The four groups were the Very Low Hispanic Enrollment Group (Less than 10% Hispanic enrollment), Low Hispanic Enrollment Group (10%-25% Hispanic enrollment), Moderate Hispanic Enrollment Group (26%-40% Hispanic enrollment) and the High Hispanic Enrollment Group (Greater than 40% Hispanic enrollment). The chi-square statistical pro-

cedure was used to analyze the significance of differences between groups on selected survey questions.

Summary of Findings

The results are summarized in this section for each of the research questions posed in Chapter I.

Procedures Used to Assess Spanish-Speaking Students

Six research questions related specifically to issues in conducting speech and language evaluations with Spanish-speaking students. The data for these questions, obtained from speech-language pathologists working in public school speech and language therapy programs, are summarized below:

RESEARCH QUESTION 1.1: To what extent are speech-language pathologists able to ensure that speech and language evaluations are conducted in Spanish when Spanish-dominant children are referred for testing?

The percentage of public school speech-language pathologists reporting that they would be able to ensure evaluations in Spanish was 75.32% for articulation testing and 78.57% for language testing. None of the differences between groups was significant at the .05 level. Lack of access to qualified assessment personnel was the primary reason that testing in Spanish could not be guaranteed.

RESEARCH QUESTION 1.2: To what extent are articulation and language screening tests being administered in Spanish to identify Spanish-speaking children with possible speech and/or language handicaps?

A total of 56.49% of public school speech-language pathologists reported use of Spanish articulation and lan-

guage screening tests at their schools. The Very Low Hispanic Enrollment Group reported use of Spanish screening tests significantly less often than either the Moderate Hispanic Enrollment Group ($p < .05$) or the High Hispanic Enrollment Group ($p < .01$). No other significant differences were observed.

The extent to which Spanish speech and language screening tests had been administered may be related to the extent to which speech and language therapy was available in Spanish. Since only 16.99% of public school speech-language pathologists indicated that speech and language therapy was available in Spanish at their schools, many schools were making use of Spanish screening tests even though they were not providing speech and language therapy in Spanish.

RESEARCH QUESTION 1.3: What published English articulation and language tests are being used to assess Spanish-dominant children's proficiency in the English language?

A total of 12 language tests and two articulation tests administered in English were reported to be in use by three percent or more of the responding sample. Language tests administered in English that were reported to be in use by 20% or more of the respondents were the Del Rio Language Screening Test, Test for Auditory Comprehension of Language, Peabody Picture Vocabulary Test, and the Northwestern Syntax Screening Test. The English articulation

test most often reported was the Fisher-Logemann Test of Articulation.

RESEARCH QUESTION 1.4: What published Spanish articulation and language tests are being used, and to what extent are these tests providing sufficient information to determine whether or not Spanish-dominant children have handicaps?

A total of ten Spanish language tests and three Spanish articulation tests were reported to be in use by three percent or more of the respondents. Spanish language tests reported to be in use by 20% or more of the respondents were the Del Rio Language Screening Test, Test for Auditory Comprehension of Language, and the Screening Test of Spanish Grammar. The Austin Spanish Articulation Test was the articulation measure most often reported.

The three Spanish assessment instruments that were most frequently judged as sufficient for the identification of Spanish-dominant children with language handicaps were the Test for Auditory Comprehension of Language, Screening Test of Spanish Grammar, and the Del Rio Language Screening Test. The Test for Auditory Comprehension of Language (Spanish version) was the only one of these tests that was judged to be sufficient for the identification of language handicaps by more than 70% of respondents who rated the test as either "sufficient" or "insufficient" for the identification of children with language handicaps. Pruebas de Expresion Oral y Percepcion de la Lengua Española (PEOPLE), a test developed in Los Angeles County that has not yet been released commercially, was judged to be sufficient for

handicap identification by a higher percentage of respondents than any of the commercially available tests.

Dissatisfaction with Spanish articulation tests was expressed by only a few respondents. Both the Austin Spanish Articulation Test and the Medida Española de Articulacion were judged to be adequate for the identification of articulation handicaps by more than 90% of the respondents who rated these tests as either "sufficient" or "insufficient" for handicap identification.

RESEARCH QUESTION 1.5: What assessment tools other than commercially available tests (e.g., conversational speech samples, locally developed tests, etc.) are being used to evaluate the speech and language skills of Spanish-speaking students?

The use of samples of children's conversational speech in Spanish was reported by 58.20% of responding speech-language pathologists who worked at schools where testing had been conducted in Spanish. Differences between groups were not significant at the .05 level. Other assessment procedures reported included (1) the use of locally developed tests, (2) the use of questionnaires and/or interviews to obtain information about the child's language from parents, teachers, etc., (3) the use of Spanish translations of English tests, and (4) the use of developmental data on Spanish language acquisition in the analysis and/or interpretation of assessment findings. Locally developed screening tests, diagnostic tests, and translations of English tests into Spanish were all reported. Informal

measures requiring the child to describe pictures, name objects, and repeat sentences were among those that had been used in speech and language evaluations.

RESEARCH QUESTION 1.6: What assessment personnel (e.g., speech-language pathologists, bilingual instructional aides, etc.) are being used to evaluate the speech and language skills of Spanish-speaking students, and to what extent are these individuals perceived as competent in test administration and interpretation?

A total of 57.24% of responding public school speech-language pathologists reported that they had administered tests in English to Spanish-dominant children. There were no significant differences between groups at the .05 level.

In schools where speech and language evaluations had been conducted in Spanish, 40.46% of the responding speech-language pathologists indicated that they had been directly involved in administering one or more tests in Spanish. The percentage of speech-language pathologists administering speech and language tests in Spanish was significantly higher in the High Hispanic Enrollment Group than in either the Low Hispanic Enrollment Group ($p < .01$) or the Very Low Hispanic Enrollment Group ($p < .001$). The percentage of speech-language pathologists administering Spanish speech and language tests in the Moderate Hispanic Enrollment Group was also significantly higher than the percentage administering these tests in either the Low Hispanic Enrollment Group ($p < .05$) or the Very Low Hispanic Enrollment Group ($p < .01$).

Survey respondents who were not directly involved in

administering tests in Spanish often made use of Spanish-speaking speech-language pathologists in assessment. The use of Spanish-speaking speech-language pathologists in the assessment of articulation was reported by 81.08% of speech-language pathologists working in public schools where evaluations had been conducted in Spanish; 78.46% reported use of Spanish-speaking speech-language pathologists in testing language skills. The differences between groups were not found to be significant.

In schools where testing had been conducted in Spanish, the percentage of respondents reporting use of assessment personnel other than speech-language pathologists was 57.66% for articulation testing and 63.85% for language testing. Differences between groups were not significant. Supportive personnel used most frequently in both articulation testing and language testing were classroom aides.

Native speakers of Spanish were often used in the administration of tests and in the interpretation of test findings. A total of 61.40% of responding speech-language pathologists in schools where testing had been conducted in Spanish reported that native Spanish-speakers had been involved in administering tests. Significantly greater use of native Spanish-speakers was reported by the High Hispanic Enrollment Group than by the Very Low Hispanic Enrollment Group ($p < .05$). No other differences were found to be significant.

The use of native speakers of Spanish in the interpre-

tation of test findings was reported by 52.73% of the responding speech-language pathologists. Differences between groups were not significant.

The percentage of respondents who indicated that available assessment personnel had the competencies necessary to identify handicapped Spanish-speaking children was 79.39% for articulation handicaps and 80.92% for language handicaps. There were no significant differences between groups.

Qualifications to Conduct Assessments with Spanish-Speaking Students

Two research questions were studied relating to the qualifications of speech-language pathologists for roles in the assessment of Spanish-speaking children. Data for the first research question were obtained only from speech-language pathologists working in public school speech and language therapy programs; data for the second research question were obtained from all survey respondents.

RESEARCH QUESTION 2.1: To what extent do speech-language pathologists have the knowledge necessary to identify English articulation errors that are commonly produced by children who come from homes where Spanish is spoken?

A total of 80.52% of public school speech-language pathologists reported having the ability to identify English articulation errors commonly produced by children from homes where Spanish is spoken. The percentage of respondents reporting knowledge of the common English articulation errors was significantly higher for the High

Hispanic Enrollment Group than for the Very Low Hispanic Enrollment Group ($p < .05$). This was the only significant difference found between groups.

RESEARCH QUESTION 2.2: To what extent do speech-language pathologists in public school speech and language therapy programs and survey respondents working in other clinical or educational settings have the fluency in Spanish and the training in bilingual assessment procedures necessary to evaluate the speech and language skills of Spanish-speaking students?

Sufficient fluency in Spanish to transcribe and analyze samples of conversational speech was reported by only 11.69% of speech-language pathologists working in public school speech and language therapy programs and by only 9.20% of respondents employed in other clinical or educational settings. The percentage of survey respondents with the fluency necessary to transcribe and analyze Spanish speech samples was significantly higher for the High Hispanic Enrollment Group than for the Low Hispanic Enrollment Group ($p < .05$) or the Very Low Hispanic Enrollment Group ($p < .01$). The majority of respondents in all four of the public school groups lacked the fluency necessary to transcribe and analyze Spanish speech samples.

Sufficient fluency in Spanish to comprehend the five basic vocabulary words listed on Question 9 of the survey was reported by 19.48% of speech-language pathologists working in public school speech and language therapy programs and by 15.29% of respondents employed in other clinical or educational settings. The percentage of survey re-

spondents with the fluency necessary to comprehend the five words was significantly higher in the High Hispanic Enrollment Group than in either the Low Hispanic Enrollment Group ($p < .05$) or the Very Low Hispanic Enrollment Group ($p < .05$). There were no other significant differences.

The total percentage of respondents reporting that their previous coursework in speech-language pathology included subject matter relating to speech and language test instruments used with Spanish-speaking students was found to be 28.10% for speech-language pathologists working in public school speech and language therapy programs and 29.89% for survey respondents working in other clinical or educational settings. Differences between the four public school speech and language therapy groups were not significant at the .05 level.

The total percentage of respondents reporting that they had been in attendance at workshops relating to the identification of Spanish-speaking children with speech and language handicaps was 74.03% for speech-language pathologists working in public school speech and language therapy programs and 45.98% for survey respondents working in other clinical or educational settings. A significantly higher percentage of speech-language pathologists in the High Hispanic Enrollment Group had attended workshops than in the Very Low Hispanic Enrollment Group ($p < .05$). No other differences between the four groups were significant.

Summary of Guidelines

The quantitative analysis of the survey data and the descriptive analysis of respondents' comments on an open-ended survey question made it possible to identify issues of concern to practicing speech-language pathologists in the assessment of Spanish-speaking students. It became clear that inadequacies of available test instruments and the shortage of qualified personnel to conduct the testing are problems that need to be considered to ensure that Spanish-speaking children are appropriately assessed. The information obtained from the current study and from a review of the previous literature made it possible to develop guidelines that reflect current concerns in the identification of Spanish-speaking children with speech and language handicaps.

A summary of selected guidelines developed as a result of this research is presented below:

Use of Test Instruments

1. Spanish speech and language screening tests should be administered to all Spanish-speaking children at school entrance.
2. Children who have been exposed to both English and Spanish should be tested in both languages using test instruments that reflect their culture and experience background.
3. Samples of the child's conversational speech should

always be obtained in assessment, along with information regarding the extent to which the child has been exposed to English and Spanish.

4. Spanish-speaking children should not be identified as having speech and/or language handicaps based solely on scores derived from standardized tests.

Roles and Responsibilities of Speech-Language Pathologists in Assessment

1. The speech-language pathologist should be involved only in the administration of test instruments for which he/she has the necessary qualifications.

2. The speech-language pathologist should be involved in decision-making regarding the assessment procedures and personnel used in conducting speech and language evaluations with Spanish-speaking students.

3. The speech-language pathologist should be involved in the review of all assessment data and in decision-making regarding the Spanish-speaking child's need for a remedial program of speech and language therapy.

Using Bilingual Personnel Other than Speech-Language Pathologists in Assessment

1. The assessment personnel should have the educational background and the language fluency necessary to administer the tests correctly and to relate to the students being assessed.

2. The assessment personnel should be provided with

specific training for each of the tests that they will be asked to administer to Spanish-speaking children.

3. The assessment personnel should not be given the responsibility for making decisions regarding students' instructional needs.

Training Speech-Language Pathologists to Assess Spanish-Speaking Students

1. Coursework offered in academic programs designed to train speech-language pathologists should provide information regarding the use of formal tests, conversational speech samples, and other techniques in the identification of Spanish-speaking children with speech and language handicaps.

2. Coursework offered in academic programs designed to train speech-language pathologists should provide information regarding the selection, training, and use of bilingual paraprofessionals (e.g., classroom instructional aides) in testing Spanish-speaking children.

3. School districts should provide opportunities for their speech-language pathologists to participate in workshops relating to the identification of Spanish-speaking children with speech and language handicaps; the content of these workshops should be determined based on local needs assessment data.

Conclusions

Several important conclusions were derived from this study of procedures used in conducting speech and language evaluations with Spanish-speaking students. These conclusions relate specifically to (1) the test instruments used in assessment, (2) the personnel involved in administering tests, and (3) the training of speech-language pathologists for roles in the assessment of Spanish-speaking children.

The conclusions stated below are based on data obtained in Los Angeles County and are not necessarily generalizable to other geographic settings.

Conclusions Regarding Test Instruments

1. Speech-language pathologists are concerned about the inadequacies of commercially available Spanish language tests. These tests are often not providing the information needed to identify Spanish-speaking children with handicaps. Commercially available Spanish articulation tests, on the other hand, appear to be meeting current needs.

2. Testing to identify Spanish-speaking children with speech and language handicaps often has not included samples of the child's Spanish conversation as an assessment measure. Almost half of speech-language pathologists working in schools where speech and language evaluations had been conducted in Spanish reported that conversational speech samples had never been used in assessment. Thus,

an analysis of the child's functional use of language for communication purposes (i.e., pragmatic aspects of communication) was often not being included in the testing.

Conclusions Regarding Assessment Personnel

1. The supply of speech-language pathologists who speak Spanish fluently is insufficient to meet current needs. The majority of speech-language pathologists working in public schools where speech and language evaluations had been conducted in Spanish, however, indicated that they had access to bilingual personnel with the competencies necessary to administer tests to Spanish-speaking children. Spanish-speaking children with identified speech and/or language handicaps are not always able to receive speech and language therapy in Spanish; the survey data revealed that the availability of speech and language therapy in Spanish is limited.

2. The use of bilingual classroom instructional aides and other paraprofessionals to administer speech and language tests is a widespread practice that, because of the shortage of bilingual speech-language pathologists, appears to be necessary if Spanish-dominant children are to be appropriately assessed in their dominant language.

Conclusions Regarding Training of Speech-Language Pathologists

1. The training necessary to conduct evaluations with Spanish-speaking students has generally not been provided

to speech-language pathologists in their formal schooling.

2. Many speech-language pathologists have attended workshops relating to issues in the identification of Spanish-speaking children with speech and language handicaps; the effectiveness of these workshops in providing speech-language pathologists with the skills necessary to assume roles in the assessment of Spanish-speaking children could not be determined from this research.

3. Most practicing speech-language pathologists have limited fluency in the Spanish language.

Although the conclusions presented above indicate that problems are being experienced in the assessment of Spanish-speaking children, the survey data indicate that progress is being made in improving assessment practices. Schools with large Hispanic populations appear to be more adequately prepared to conduct speech and language evaluations than are schools with small Hispanic student populations. In the current study, the availability of Spanish-speaking speech-language pathologists, Spanish speech and language screening tests, and speech and language therapy services provided in Spanish was highest in the High Hispanic Enrollment Group.

Many of the problems currently being experienced in the assessment of Spanish-speaking children seem amenable to resolution if effective leadership is provided by professionals in the field of speech-language pathology. The guidelines developed as a result of the current research

should prove to be valuable to individuals who wish to assume leadership roles in the development of procedures for the identification of Spanish-speaking children with speech and language handicaps.

One does not need to be employed in an administrative position to serve in a leadership role. Leadership involves working with people to effect change. Practicing speech-language pathologists are experts in the diagnosis and remediation of speech and language handicaps and must make use of that expertise in developing assessment procedures designed to meet the needs of Spanish-speaking students. Speech-language pathologists must assume leadership roles in working with teachers, administrators, parents, and with the community to ensure that all Spanish-speaking children with speech and language handicaps are identified and to ensure that appropriate remedial programs are provided.

Recommendations for Further Research

Recommendations for additional research related to the topic of this investigation are the following:

1. It is recommended that this study be replicated in geographical regions other than Los Angeles County to determine the extent to which assessment practices differ in different localities.
2. It is recommended that this study be replicated using criteria for selecting respondents different from

those used in the current research. The current study was restricted to members of the American Speech-Language-Hearing Association. The assessment procedures used by the highly experienced and well-trained sample who participated in this research may be very different from those used by speech-language pathologists who do not meet ASHA membership criteria.

3. It is recommended that research be conducted to examine the relationship between speech-language pathologists' proficiency in Spanish and the specific types of Spanish language assessment instruments that they have administered to Spanish-speaking students.

4. It is recommended that research be conducted to study the roles that speech-language pathologists have played in the selection and training of Spanish-speaking instructional aides and other personnel used in conducting speech and language evaluations with Spanish-speaking students.

5. It is recommended that research be conducted to study the extent to which workshops on bilingual language assessment are providing speech-language pathologists with skills relevant to the identification of Spanish-speaking students with speech and language handicaps.

6. It is recommended that descriptive research be conducted in which case studies of individuals who have been identified as speech and/or language handicapped are examined to determine the specific assessment procedures

used in identification.

7. It is recommended that longitudinal studies be conducted to study ongoing changes in the assessment procedures used within school districts to identify Spanish-speaking children with speech and language handicaps.

8. It is recommended that research be conducted to examine the relationship between assessment procedures used in evaluating bilingual Spanish-speaking students and those used in evaluating other bilingual student populations.

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APPENDICES

APPENDIX A
SURVEY INSTRUMENT

Survey: THE IDENTIFICATION OF SPANISH-SPEAKING CHILDREN
WITH SPEECH AND LANGUAGE HANDICAPS

1. County in which you work: _____
2. Your ethnic background:

☐ A. Anglo	☐ D. American Indian
☐ B. Black	☐ E. Asian
☐ C. Hispanic	☐ F. Other (specify): _____
3. Years of experience as a speech-language pathologist in the public schools:

☐ A. None.	☐ D. 4-6 years.
☐ B. Less than one year.	☐ E. 7 or more years.
☐ C. 1-3 years.	
4. Your current employment:

☐ A. Speech-language pathologist involved in conducting speech and language therapy with a caseload of students in a public school setting. Does your caseload include students from regular education classrooms? ☐ Yes. ☐ No.	
☐ B. Teacher of full-day special education classroom (e.g., classroom for children with severe disorders of language, etc.)	
☐ C. Other (specify): _____	
5. Areas in which you currently hold the ASHA Certificate of Clinical Competence (CCC):

☐ A. Speech-Language Pathology.	
☐ B. Audiology.	
☐ C. Neither of the above.	

6. Did your previous coursework in speech and language pathology include subject matter relating to specific test instruments designed for use in evaluating the speech and language skills of Spanish-speaking students?

☐ A. Yes.

☐ B. No.

7. Have you attended any workshops relating to the identification of Spanish-speaking children with speech and language handicaps?

☐ A. Yes.

☐ B. No.

8. Do you know Spanish well enough to transcribe and analyze syntax from tape-recorded samples of conversational speech in Spanish?

☐ A. Yes.

☐ B. No.

9. The Spanish words below were selected from three commonly used language dominance tests:

martillo peine pan queso lumbre

Do you know Spanish well enough to administer vocabulary tests that require the examiner to comprehend nouns such as those listed above? (Please respond "yes" only if you comprehend the meaning of all five of the Spanish words above.)

☐ A. Yes.

☐ B. No.

***PLEASE COMPLETE THE REMAINING QUESTIONS ON THIS QUESTIONNAIRE ONLY IF YOU SELECTED RESPONSE "A" ON QUESTION #4.

10. Estimated percentage of Hispanic students in the total school population where you conduct therapy (If you serve more than one school, report the percentage for the school that has the highest percentage of Hispanic students.):

☐ A. Less than 10%

☐ C. 26% - 40%

☐ B. 10% - 25%

☐ D. Over 40%

11. Do any of the schools that you serve administer articulation and language screening tests in Spanish to identify Spanish-speaking children who may require speech and language therapy?
- ___A. Yes.
- ___B. No.
12. Are any of the schools that you serve currently able to provide speech and language therapy in Spanish to Spanish-dominant children with speech and language handicaps in their native language?
- ___A. Yes.
- ___B. No.
13. If children who speak Spanish as their dominant language are referred for testing to determine whether or not they have a handicap in speech sound articulation, would you be able to ensure that an evaluation is conducted in Spanish by a Spanish-speaking examiner?
- ___A. Yes.
- ___B. No. If you responded "no," specify reason: _____
-
14. If children who speak Spanish as their dominant language are referred for testing to determine whether or not they have a handicap in oral language (e.g., vocabulary, syntax, etc.), would you be able to ensure that an evaluation is conducted in Spanish by a Spanish-speaking examiner?
- ___A. Yes.
- ___B. No. If you responded "no," specify reason: _____
-
15. Have you administered any commercially available tests to evaluate the Spanish-dominant child's ability to speak English?
- ___A. Yes.
- ___B. No.
- If you responded "yes," list articulation and language tests that have been used most frequently:

16. Do you have the knowledge necessary to identify English articulation errors that are commonly produced by children who come from homes where Spanish is spoken (i.e., articulation errors resulting from differences in the English and Spanish sound systems)?

___A. Yes.

___B. No.

***PLEASE COMPLETE QUESTIONS 17 THROUGH 26 ONLY IF SPEECH AND LANGUAGE EVALUATIONS HAVE BEEN CONDUCTED IN SPANISH WITH SPANISH-SPEAKING STUDENTS. ALL PUBLIC SCHOOL SPEECH-LANGUAGE PATHOLOGISTS MAY RESPOND TO QUESTION 27.

17. Have any of the tests used to evaluate a child's communication skills in Spanish been administered by you?

___A. Yes.

___B. No.

18. Do the assessment personnel currently available to you have the competencies necessary to accurately identify Spanish-dominant children with articulation handicaps?

___A. Yes.

___B. No. If you responded "no," specify reason: _____

19. Do the assessment personnel currently available to you have the competencies necessary to accurately identify Spanish-dominant children with language handicaps?

___A. Yes.

___B. No. If you responded "no," specify reason: _____

20. Which of the following individuals have administered articulation tests in Spanish when children with possible articulation handicaps have been referred for testing? (Please mark titles of all individuals who have administered articulation tests in Spanish.)
- ☐ A. Spanish-speaking speech-language pathologists.
 - ☐ B. Spanish-speaking psychologists.
 - ☐ C. Spanish-speaking classroom teachers.
 - ☐ D. Spanish-speaking classroom instructional aides.
 - ☐ E. Other (specify): _____
 - ☐ F. Articulation tests have not been administered in Spanish.
21. Which of the following individuals have administered language tests in Spanish when children with possible language handicaps have been referred for testing? (Please mark titles of all individuals who have administered language tests in Spanish.)
- ☐ A. Spanish-speaking speech-language pathologists.
 - ☐ B. Spanish-speaking psychologists.
 - ☐ C. Spanish-speaking classroom teachers.
 - ☐ D. Spanish-speaking classroom instructional aides.
 - ☐ E. Other (specify): _____
 - ☐ F. Language tests have not been administered in Spanish.
22. Have persons who speak Spanish as their primary language ever been involved in administering articulation and/or language tests to Spanish-speaking children who have been referred for testing at your schools?
- ☐ A. Yes.
 - ☐ B. No.
 - ☐ C. I don't know.
23. Have persons who speak Spanish as their primary language ever been involved in interpreting test data obtained in speech and language evaluations conducted with Spanish-speaking children who have been referred for testing at your schools?
- ☐ A. Yes.
 - ☐ B. No.
 - ☐ C. I don't know.

24. Do you know the titles of any commercially available Spanish articulation tests and/or Spanish oral language tests that have been used at your schools to determine whether or not Spanish-speaking children have articulation handicaps and/or language handicaps?

 A. Yes.

 B. No.

If you responded "yes," please complete the information requested below:

In the spaces below, list Spanish articulation tests that have been used at your schools:	Has this test generally provided sufficient information to determine whether or not Spanish-dominant students have articulation handicaps in Spanish?
	<u> </u> Yes <u> </u> No <u> </u> I don't know
	<u> </u> Yes <u> </u> No <u> </u> I don't know
	<u> </u> Yes <u> </u> No <u> </u> I don't know
	<u> </u> Yes <u> </u> No <u> </u> I don't know
<hr/>	
In the spaces below, list Spanish oral language tests that have been used at your schools:	Has this test generally provided sufficient information to determine whether or not Spanish-dominant students have language handicaps in Spanish?
	<u> </u> Yes <u> </u> No <u> </u> I don't know
	<u> </u> Yes <u> </u> No <u> </u> I don't know
	<u> </u> Yes <u> </u> No <u> </u> I don't know
	<u> </u> Yes <u> </u> No <u> </u> I don't know
	<u> </u> Yes <u> </u> No <u> </u> I don't know
	<u> </u> Yes <u> </u> No <u> </u> I don't know

25. Are samples of Spanish-speaking children's conversational speech in Spanish ever used in assessment at your schools to identify speech and/or language handicaps?

☐ A. Yes.

☐ B. No.

☐ C. I don't know.

26. In the space below, briefly describe any informal assessment instruments, tests developed within your school district, etc. that have been used at your schools to identify Spanish-speaking students with speech and/or language handicaps (Do not describe any of the commercially available tests listed on Question #24):

27. The space below is for any additional comments or suggestions that you would like to make regarding procedures used in conducting speech and language evaluations with Spanish-speaking students:

APPENDIX B
COVER LETTER FOR THE SURVEY

SCHOOL OF EDUCATION
UNIVERSITY OF SAN DIEGO

Survey: THE IDENTIFICATION OF SPANISH-SPEAKING CHILDREN
WITH SPEECH AND LANGUAGE HANDICAPS

I am presently conducting research for a doctoral dissertation. The objectives of this research are the following:

1. To identify the procedures currently being used in speech and language therapy programs to assess Spanish-speaking students.
2. To determine the extent to which practicing speech-language pathologists are qualified to conduct evaluations with Spanish-speaking students.
3. To develop guidelines for using test instruments and personnel in the identification of Spanish-speaking students with speech and language handicaps.

The attached survey instrument is concerned with issues in the speech and language assessment of children who speak Spanish. I would appreciate it if you would complete the survey and return it to me in the enclosed envelope within ten days. Please do not write your name or the name of the organization where you are employed on the survey.

As a practicing speech-language pathologist, I feel that the information gained from this research will be useful to members of our profession. Following completion of the dissertation, I plan to submit an article summarizing the results of the research to an ASHA journal.

Thank you very much for your assistance. A self-addressed stamped envelope is enclosed for your convenience.

Sincerely,

Larry J. Mattes
Speech-Language Pathologist
3917 Marvin St.
Oceanside, CA 92056

APPENDIX C
FOLLOW-UP LETTER FOR THE SURVEY

SCHOOL OF EDUCATION
UNIVERSITY OF SAN DIEGO

Survey: THE IDENTIFICATION OF SPANISH-SPEAKING CHILDREN
WITH SPEECH AND LANGUAGE HANDICAPS

In December, 1981 a survey instrument concerned with procedures used in conducting speech and language evaluations with Spanish-speaking students was mailed to you. The specific objectives of this doctoral dissertation are the following:

1. To identify the procedures currently being used in speech and language therapy programs to assess Spanish-speaking students.
2. To determine the extent to which practicing speech-language pathologists are qualified to conduct evaluations with Spanish-speaking students.
3. To develop guidelines for using test instruments and personnel in the identification of Spanish-speaking students with speech and language handicaps.

I would very much like to have your input on the survey if you have not yet returned it to me. A high return rate is needed to ensure that the results are representative of the subject population. Other phases of the dissertation cannot be carried out until analysis of the survey data has been completed.

I am enclosing another copy of the survey for the convenience of individuals who have not yet completed and returned the instrument to me. Please do not write your name or the name of the organization where you are employed on the survey.

I would appreciate it if you would return the survey to me by January 12th in the enclosed self-addressed stamped envelope. Thank you for your assistance.

Sincerely,

Larry J. Mattes
Speech-Language Pathologist
3917 Marvin St.
Oceanside, CA 92056

VITA

Name: Lawrence J. Mattes
 Birthdate: 2-24-51
 Birthplace: Los Angeles, California

Education:

B.A., 1973- University of California, Santa Barbara

Majors: Psychology
 Speech and Hearing

M.A., 1976- University of California, Santa Barbara

Major: Speech and Hearing

M.A., 1978- California Polytechnic State University, San Luis Obispo

Major: Education with a Specialization in Reading

Ed.D., 1982-University of San Diego

Major: Educational Leadership with a Professional Growth Component in Special Education

Professional Employment and Consulting

1975-1978 Speech-Language Pathologist
 Orcutt Union School District
 Orcutt, California

1978-Present Speech-Language Pathologist
 Oceanside Unified School District
 Oceanside, California

1980-Present Consultant and Specialist, Bilingual Speech and Language Assessment and Remediation
 San Diego County, California

Selected Publications

Mattes, L. J. Classroom oral language development: An elementary school oral language curriculum. Springfield, Ill: Charles C Thomas, Publisher, 1982.

Mattes, L. J. The elicited language analysis procedure: A method for scoring sentence imitation tasks. Language, Speech, and Hearing Services in Schools, 1982, 13, 37-41.

Mattes, L. J. Helping a child who stutters to read fluently. Reading Teacher, 1981, 35, 80-81.