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AUTHOR Mace-Matluck, Betty J.
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ABSTRACT

The first part of these findings is a report on a study of the characteristics of 120 Spanish-English bilingual children's speech over a two-year period in the classroom, on the playground, and at home. Three types of language measures were used as well as audiotaped speech samples taken in the three communication settings. Preliminary findings suggest that (1) children vary in language usage and preference depending on the setting; (2) discourse in the classroom is predominantly English; (3) acquisition of reading skills and of language is individualistic in nature; (4) codeswitching is more prevalent in some communities than others; and (5) multiple measures of oral language proficiency may be needed for valid assessment. The second part of the report focused on the bilingual discourse of 24 children in kindergarten through grade two, using utterance as the basic unit of speech. The analysis examined: (1) frequency of codeswitching in two different border areas in Texas; (2) codeswitching over a period of two years; (3) language mixing as a function of age/grade level; and (4) type of language mixing over time and by region. It was found that codeswitching did not occur with great frequency, and that regional differences were found in the extent to which it did occur. (AMH)

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A LONGITUDINAL STUDY OF THE ORAL LANGUAGE DEVELOPMENT OF TEXAS
BILINGUAL CHILDREN (SPANISH-ENGLISH)
FINDINGS FROM THE SECOND YEAR

1. Patterns of Language Mixing
among the Children in
the Second Year of the Study
2. General Characteristics of
the Children's Language
Use in Three Environments

Betty J. Mace-Matluck
Southwest Educational Development Laboratory

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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A LONGITUDINAL STUDY OF THE ORAL LANGUAGE DEVELOPMENT OF TEXAS
BILINGUAL CHILDREN (SPANISH-ENGLISH):
FINDINGS FROM THE SECOND YEAR

General Characteristics of the Children's Language Use
in Three Environments

Betty J. Mace-Matluck
Southwest Educational Development Laboratory

Paper presented at the Joint Ninth Southwest Regional Conference of the
International Reading Association and Ninth Texas State Council of the
International Reading Association Convention, San Antonio, Texas
January 28-31, 1981

For the past three years the Southwest Educational Development Laboratory has been engaged in a program of research on the teaching of reading to bilingual children. The research is funded by the National Institute of Education. The primary goal of that research is to map out some of the variations which exist in bilingual reading programs and to assess the impact of those variations on the achievement of children with varying language and cognitive backgrounds. The research is a seven-year, longitudinal study which will track the reading progress of approximately 400 children from kindergarten through grade four. The study is designed to examine the effects of the interaction of certain learner characteristics and type of reading instruction on the reading achievement of Spanish-English bilingual children in the state of Texas. Among the learner characteristics of interest to us are cognitive style, cognitive development, degree of bilingualism, and level of linguistic awareness. Of particular importance in understanding the effects of the reading instruction on the child's reading progress is a consideration of the child's degree of bilingualism, her/his pattern of language use, and the level of development she/he has reached in each of the languages she/he speaks. Thus the nature of our research requires extensive and precise examination of the children's oral language development.

The Subjects

The study is built around a "natural variation" design and calls for a careful selection of school districts, schools, teachers, and students. For some purposes, all students in a class are tested with certain instruments; for other purposes, the instructional programs for the entire class is observed. In addition, a target subsample of ten students is selected

in each classroom for a more detailed "case study" examination. This target group of students is the subject of special observation and of individual assessment. The target students were selected to be representative of the population from which they were drawn in terms of sex, language status, and cognitive style as defined by the constructs of field dependence/field independence and reflection/impulsivity. In Year Two, the sample consisted of 120 Spanish-English bilingual students from three school districts in the border areas of south central and southwestern Texas. Most of the children were from low to lower-middle income families. About one fourth are classified as migrant; all of the children are bilingual to one degree or another, with the majority of the children dominant in Spanish.*

Language Assessment

For the purpose of assessing the children's language abilities and for monitoring their language growth, three types of language measures are used in the study: (1) an oral language proficiency test, (b) teacher ratings, and (c) an ethnographic verification of the children's language abilities.

The oral language proficiency test is selected by the school district from a list of state-approved, commercially-available language tests. All of the children in the sample during the first two years were administered the Language Assessment Scales - LAS (De Avila & Duncan, 1977) in both English and Spanish in the fall of each year.

Teacher ratings of the children's language ability are provided to the project on three occasions during the school year. During the first month

*The study presently contains children who reflect a much wider range in degree of bilingualism and a wider range of socioeconomic status as well. It also contains a monolingual English-speaking control group and a control group of monolingual Spanish-speaking students. However, these latter children entered the study just this fall and are not discussed in this report.

of school, the teachers rated all children in their classes on the Student Operational Language Assessment Scale (Duncan & De Avila, 1976). This provides an impressionistic, global view of the child's ability in both languages, which may be used to verify the child's oral language proficiency test scores. This information is also used as one criterion for selecting target children in each of the classes. In the month of December, after the teachers have become familiar with the language patterns and usage of their children, all target children are rated by their teachers on the SEDL Oral Language Proficiency Scale (Mace-Matluck, et al., 1979) in both English and Spanish (see Appendix 1). The teachers rate the children once again on this same scale in April or May, concurrent with the administration of the reading achievement tests.

For the purpose of monitoring the child's language growth as well as verifying the child's language status, audiotaped speech samples are taken once a month from each of the target children (Mace-Matluck, et al., 1978). The samples are taken on a rotating schedule in three communication settings: in the classroom, in the home, and either on the playground or in other non-instructional settings within the school.

The taped samples for each child are 20-30 minutes in length. Standard cassette tape recorders and lapel, or lavalier, microphones are used for taping in the classroom. The taped samples on the playground and in the home are obtained by placing an activated microcassette tape recorder in the pocket of a specially-designed belt-and-sash worn by the child. This is similar to that worn by children on school-crossing patrol. A very small lapel microphone extends from the tape recorder up under the sash and through a buttonhole at shoulder height, ensuring that the microphone is ideally placed to pick up the child's speech, as well as that of others

around her/him.

Each of the tapes is transcribed by a bilingual speaker. SEDL staff members and/or consultants who have expertise in oral language assessment and linguistics examine the transcripts and taped samples for extent and quality of language and for language preference in each of the communication settings. As we evaluate the tapes we record certain information about the total interaction (e.g., general language use of the student and of the interlocutors, dialect variations, instances of codeswitching and language alternation, errors in phonological and grammatical structures, instances of egocentric speech, spontaneous use of folkloric games, rhymes, stories, songs, etc.). In addition, the child is given an oral proficiency rating based on the same criteria used by the teachers in making their ratings.

Findings and Discussion

The three sources of information (the test scores, teacher ratings, and taped samples) have provided us with a rich and varied data bank. From the analyses we have made to date, several statements can be made about the general characteristics of the children's language use within the three communication settings.

Language Preference Across the Three Settings

Table 1 depicts the percentage of tapes that were characterized by a particular type of language use by the composite group of target children representing the three school districts. In the classroom English was the child's choice of language on about one half of the tapes; Spanish was used by the child on about one third of the tapes; both languages were used in one or more episodes in 20 percent of the tapes. As was true of the first

Table 1
 Type of Language Use of the Target Children Within
 Three Communication Settings - All Sites

Type of Language Use	SETTING		
	Classroom (N = 154)	Playground (N=177)	Home (N=156)
Primarily Spanish	29%	59%	57%
Primarily English	49%	18%	22%
Alternating (S/E)	1%	-	-
Both (one or more episodes in which each language was used primarily)	20%	22%	17%
Codeswitching	1%	1%	4%

year data, we find very little codeswitching by the children in the classroom even though there were numerous instances of codeswitching and code-mixing by the teachers.

On the playground the children's obvious choice was Spanish. However, approximately 40 percent of the tapes were classified as primarily English or containing episodes of both English and Spanish on the same tape. We have found that, overall, more English is being used on the playground in this year's data than in those of the previous year and that codeswitching and language mixing is less prevalent as well.

The home setting essentially mirrors the patterns of language use found on the playground. Overall, the children tended to speak Spanish to adult members of the family, but to show a preference for English when conversing with older siblings and playmates. In only a few homes was English used as the primary language of communication with all family members.

Language use by school district. When comparing the data across the school districts (see Table 2) one finds a similar pattern of language use in the home setting across the three districts. However, considerably more English was used by the children on the playground in the two school districts located some 40 miles from the city of El Paso (Districts B and C) than by the children from the rural, rather isolated school district in the Rio Grande Valley of south central Texas (District A).

Another interesting pattern is noted in the data on classroom usage. Notice that in District A, where the children are using primarily Spanish on the playground much of the time, there is a heavy emphasis on English in the classroom. Some use of Spanish is maintained, however, either as the primary language or with one or more episodes of primarily Spanish on the tapes where both languages are used. Also notice that, while negligible,

Table 2
 Type of Language Use of the Target Children Within Three
 Communication Settings - by School District

Type of Language Use	SETTING								
	Classroom			Playground			Home		
	A	B	C	A	B	C	A	B	C
Primarily Spanish	20%	38%	53%	67%	52%	42%	58%	56%	56%
Primarily English	51%	63%	42%	11%	29%	19%	17%	29%	26%
Alternating	2%	-	-	-	-	-	-	-	-
both	27%	-	37%	20%	17%	33%	21%	16%	10%
Codeswitching	-	-	3%	1%	2%	-	4%	-	8%

	<u>District A</u>	<u>District B</u>	<u>District C</u>
Classroom	N = 108	N = 08	N = 38
Playground	N = 89	N = 52	N = 36
Home	N = 72	N = 45	N = 39

alternating (concurrent) use of the two languages is found only in District A. The other two districts (B and C) tend to keep the two languages separate, with a greater emphasis on English in the classroom in District B and about equal amounts of Spanish and English used in District C.

Language use by grade level. We find no great difference in the pattern of language use among the children on the basis of age/grade level within the home setting (see Table 3). On the playground, we see a greater use of both languages by the older children, suggesting that the children have gained considerably more skill and confidence in their English after one or more years of schooling. The classroom reveals a distinct difference among grade levels in the amount of Spanish used by the children. At kindergarten, there is a decided preference for Spanish. At first grade, the emphasis shifts dramatically to English. At second grade, English continues to be the primary language of the children with primarily Spanish used only occasionally. However, we see an increase at second grade of more episodes occurring in each of the languages within the same tape. The children seem to be able to shift to one language or the other on demand at that point in their schooling.

Quality of Language Used Across the Three Settings

We have found that the quality of the children's language, as well as their language preference, varies depending upon the setting. In the classroom the children's language is greatly restricted as compared with their use of language on the playground and in the home. In that setting, their utterances, both in English and in Spanish, tend to be shorter and less rich in vocabulary and syntactic structures. A definite rise in pitch is noticeable in the voices of some of the children on their classroom tapes.

Table 3
 Type of Language Use of the Target Children Within the Three
 Communication Settings - by Grade Level

Type of Language Use	SETTING								
	Classroom (N=154)			Playground (N=177)			Home (N=156)		
	K	1	2	K	1	2	K	1	2
Primarily Spanish	49%	26%	5%	60%	59%	57%	56%	57%	61%
Primarily English	33%	60%	56%	23%	13%	17%	27%	19%	22%
Alternating	4%	-	-	-	-	-	-	-	-
Both	14%	12%	39%	13%	27%	23%	16%	17%	17%
Codeswitching	-	2%	-	-	2%	3%	2%	8%	-

We are quite sure that these differences are not due to the type of teachers we have--these are good teachers and proficient bilinguals who empathize with the students--nor are they a function of a particular school per se, nor of the type of school program being offered. This same phenomenon is occurring in all of our sites. We feel that it is more likely due to the nature of school itself--the institution we have created--and how children react to that environment. It is also related, we believe, to the fact that the school setting requires a kind of formal language which many children have not yet learned to use and which must be acquired in the course of language development. What we find typically in the tapes is that the teacher initiates most of the interactions; the children respond with utterances limited to short answers or simple declarative sentences, which often include false starts and/or suspensions. At all grade levels in which we are presently involved (k-2), the children at times also respond with oral narratives or expository text of two or three sentences usually joined by connectors such as and or then. As the children move into second grade we notice that they are producing longer oral narratives, but they are still made up mostly of conjoined sentences. A few children, however, are beginning to be more explicit in their responses and more definite in their mode of delivery, suggesting to us that those children are beginning to acquire the features of language needed to deal with the formal language of the textbooks and with the formal spoken language of the classroom that is employed when dealing with abstractions and problem solving.

From the point of view of evaluating children's use of language for interpersonal communication, the playground tapes have been the most productive. It is here that we find the greatest variety of language forms and usage. Negatives, interrogatives, and imperatives (all but missing in the

classroom) abound on the playground, and the children perform in a variety of discourse roles including that of initiating and maintaining as well as responding.

The home tapes have all been extremely valuable for this purpose and have helped us in understanding the home environment of the children and the language background they bring with them. It is in these tapes that we have found a rich source of games, rhymes, songs, and stories that the children know and use.

In addition, a computer program has been written to do certain analyses of the taped language data from all three settings. The speech found on 44 of the tapes has been stored in the computer and an analysis of the children's oral vocabulary in Spanish has been completed. When examined in this manner, the evidence is clear that these bilingual children have a rich and varied vocabulary in their mother tongue. As the analyses continue, it is hoped that Spanish words that are actually used by bilingual children in the U.S. can be documented and organized in terms of categories and frequency. Work of this kind should be invaluable in designing materials for oral language development and reading for these children.

Our discussion of the general characteristics of the children's language would not be complete without some mention of the children's use of English. For those children in the subsample who appeared at the beginning of the study to be equally at home in either language, their English was quite similar to that of monolingual speakers of English of the same age, with the possible exception of a slight overlay of Spanish in their English phonological system (e.g., rhythm, vowel structures). The children who were identified as monolingual speakers of Spanish at the beginning of the study reflected the early stages of second-language acquisition during the first

year: they appeared to understand more English than they could produce; they had control of some stock phrases; they knew and used some of the morphological signals; but their range of syntactic patterns was quite limited. The remaining children were dominant in Spanish at the beginning of the study and reflected various stages in their acquisition of English. Common to all of these children was a limited range of English vocabulary. As was noted in the first year data, English was and still is used more frequently by all of the children when dealing with the alphabet, numbers in sequence, color names, school objects (e.g., glue, tape recorder, tape, teacher, folder), and playground items and terms (e.g., swings, slide, etc., and On your mark! Get set! Go!). Also songs, rhymes, and chants learned in school frequently appear on the tapes in English.

The second year data show clearly a number of changes in the children's development of Spanish and in their ability to use English. Changes in the children's patterns of codeswitching and codemixing are also noted. These are discussed in the papers which follow.

In closing I should like to say that as we continue the analyses of the data from the speech samples and other sources, we will continue to look for evidence of growth by individual children and for better ways of characterizing the language of children who are perceived by their teachers to be effective users of the language versus those who are perceived to be less so. We are also beginning to work toward trying to define those aspects of language which predict to school success.

Summary

To summarize, we have observed over a two-year period the language development and patterns of language use of 120 Spanish-English bilingual children. Our findings to date suggest that (1) the children not only vary in their ability to use the two languages but that they show a preference for the use of one language over the other depending upon the setting and the person(s) with whom they are interacting; (2) discourse in the classroom appears to require the use of a formal style of language, which differs from that used in basic interpersonal communication; the children are sensitive to this form of language, but many children in the early years of schooling appear to be somewhat limited in their ability to interact in this register; (3) children's acquisition of reading skills and the acquisition of language are both highly individualistic in nature; both appear to be influenced in no small part by factors outside of the instructional program; (4) codeswitching, while negligible in the speech behavior of the children, is more prevalent in the children's speech in some communities than in others; it appears that as children get older and/or gain more skill in the two languages, more code-switching occurs as does more complex forms (such as phrasal switching); and (5) multiple measures of oral language proficiency may be needed to provide a valid and reliable assessment of the bilingual child's language abilities.

Finally, what are the implications for the classroom that we can draw from our study in its present stage? Our experience would seem to suggest the following:

1. Look at these children as individuals.
2. Learn all you can about each child's ability in her/his two languages as well as her/his patterns of language use.
3. Recognize that these children generally have a language that serves them well for interpersonal communication. It is rich in vocabulary and syntactic structures and in the functions of language needed in social interactions.

4. Notice whether or not the child is experienced in the form of language needed for the classroom. It may well be that a greater emphasis should be placed on school-related language in the materials and instruction specifically designated for oral language development.
5. Keep in mind that oral language test scores of young children may not provide a reliable picture of the child's language resources. Teachers can be trained to observe children's language behavior and to make reasonably good estimates of the children's ability to perform in the school setting.

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Appendix I

LANGUAGE SAMPLE RATING SHEET

Student's Name _____ Grade _____
 Teacher _____ Date Collected _____
 School _____ Rater _____
 District _____ Date Rated _____

1. Type of interaction (circle one):¹ T P F
2. General language use of interlocutors (circle one):² S E A C B
3. General language use of student (circle one):² S E A C B
4. Oral proficiency rating:³

SPANISH
(if used by student)

ENGLISH
(if used by student)

PRONUNCIATION	1	2	3	4	5	1	2	3	4	5
GRAMMAR	1	2	3	4	5	1	2	3	4	5
VOCABULARY	1	2	3	4	5	1	2	3	4	5
COMPREHENSION	1	2	3	4	5	1	2	3	4	5
OVERALL COMMUNICATIVE SKILL	1	2	3	4	5	1	2	3	4	5

- ¹ T = Teacher-Pupil; P = Peer-Pupil; F = Family-Pupil
- ² S = Spanish; E = English; A = Alternate use of both; C = Code Switching; B = Both
- ³ Refer to accompanying criteria sheet

STUDENT OPERATIONAL LANGUAGE ASSESSMENT

Please mark the one box which most closely describes the way this student uses English and/or Spanish.

 I. Bilingual (totally fluent) in BOTH English and Spanish

Has native-like comprehension of both English and Spanish and produces language which is coherent and syntactically (grammatically) correct, with complete native-like fluency, in both English and Spanish.

 II. Partial bilingual - English dominant

Understands all spoken English and produces English utterances with native-like fluency and correctness in syntax (grammar) and vocabulary. Also understands some spoken Spanish and can produce fairly complete sentences in Spanish but with less than native-like fluency. His/her sentences in Spanish are somewhat awkward with regularized errors in syntax and vocabulary.

 III. Partial bilingual - Spanish dominant

Understands all spoken Spanish and produces Spanish utterances with native-like fluency and correctness in syntax (grammar) and vocabulary. Also understands some English and can produce fairly complete sentences in English but with less than native-like fluency. His/her sentences in English are somewhat awkward with regularized errors in syntax and vocabulary.

 IV. Monolingual English

Understands all spoken English and speaks English with ease and complete native-like fluency and correctness. If any Spanish is understood or spoken it is no more than a few isolated words or expressions.

 V. Monolingual Spanish

Understands all spoken Spanish and speaks Spanish with ease and complete native-like fluency and correctness. If any English is understood or spoken it is no more than a few isolated words or expressions.

 VI. Limited English/limited Spanish

Does not have native competence in either English or Spanish. It may appear that he/she understands spoken English and Spanish but the oral production in both languages is labored, characterized by awkward sentences and systematic errors in syntax (grammar), vocabulary and fact. Usually can't speak English without mixing in Spanish words and vice-versa.

 VII. Late language learner

Appears to have serious linguistic difficulties. These difficulties are characterized by either a) labored and awkward production in one language with near or complete deficiencies in the other; b) total deficiencies in both languages, ie. ailingual.

ORAL PROFICIENCY RATING SCALE

Criteria

PRONUNCIATION

1. Often unintelligible due to excessive mispronunciation, making comprehension extremely difficult.
2. Intelligible, but with frequent mispronunciations which may, at times, interfere with communication.
3. Always intelligible, but reflects occasional mispronunciations which are usually systematic.
4. Essentially like that of a native speaker, except for some residue or overtones that suggest nonnativeness.
5. For all practical purposes, like that of a native speaker; pronunciation may reflect characteristic features of the dialect of the region.

GRAMMAR

1. Makes excessive number of errors in grammar, except in stock phrases; extremely limited in range and variety of syntactic structures.
2. Makes frequent errors in grammar, which may interfere with normal communication; rather limited in range and variety of syntactic structures; frequently resorts to rephrasing in midcourse.
3. Makes occasional errors in grammar which may, at times, obscure meaning; range and variety of syntactic structures are relatively limited when compared with those of native peers.
4. Makes sporadic errors in grammar that are nontypical of native speakers of the same age; grammar is essentially like that of native speakers with syntactic structures resembling those of native peers in range and variety.
5. Makes no systematic errors in syntax or morphology, except for developmental "errors" common to monolingual speakers of the same age; range and variety of syntactic structures are like those used by native speakers of the same age.

VOCABULARY

1. Vocabulary is severely limited and often hampers communication.
2. Vocabulary is limited when compared with native peers; frequent use of inappropriate terms.
3. Vocabulary is mostly adequate, but occasionally deficient.
4. Vocabulary is essentially like that of a native speaker of the same age, except for sporadic groping for appropriate terms.
5. For all practical purposes, vocabulary is like that of a native speaker of the same age.

COMPREHENSION

1. Understands very little speech, except for a limited number of items frequently used in the classroom or social setting (e.g., greetings); requires simplification, repetition, and/or much use of gestures.
2. Understands some adult or peer speech spoken at a normal rate, but often requires simplification of speech or frequent repetition or rephrasing.
3. Understands most adult or peer-group speech, spoken at a normal rate, that would usually be understood by native peers, but occasionally demonstrates lack of, or only partial, understanding.
4. Understands essentially everything, spoken at a normal rate, in school-related, social, or peer-group conversation, except for certain idiomatic phrases or conventionalized usage of the language.
5. Understands everything in both classroom and playgroup speech which would usually be expected of native speakers of the same age.

OVERALL COMMUNICATION SKILL

1. Is able to participate only minimally in school-related or peer-group conversations conducted in the language. Speech is generally characterized by labored production, incomplete sentences, and/or excessive number of errors.
2. Is able to get the gist of most school-related and peer-group conversations, but is unable to participate with facility in any but very familiar, routine conversations. Speech is frequently uneven, hesitant, and fragmented.
3. Understands and speaks the language adequately to participate in most school-related and peer-group conversations. Speech is characterized by occasional errors in grammar, some groping for words, and at times, hesitancy and unevenness in production.
4. Uses the language fluently and accurately, for the most part, and is able to participate successfully in all school-related and peer-group conversations. Speech, while smooth, effortless, and generally without error, contains some sound qualities and grammatical structures which suggest nonnativeness.
5. For all practical purposes, uses the language like a native speaker of the same age. Speech in all school-related and playgroup conversations is smooth, effortless, and native-like in accuracy.

ORAL PROFICIENCY RATING SCALE

SPANISH

Student's Name _____ Grade _____

Teacher _____ Date _____

School _____ Rater _____

District _____

INSTRUCTIONS: Please refer to the accompanying criteria sheet and circle below the number corresponding to the statement which most accurately describes the student's level of proficiency for each of the language components indicated.

PRONUNCIATION	GRAMMAR	VOCABULARY	COMPREHENSION	OVERALL COMMUNICATIVE SKILL
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5

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Patterns of Language Mixing
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Much of the literature on code-switching in the United States has focused on the use of Spanish and English by Chicano and Puerto Rican bilinguals. However, researchers in this field are increasingly turning their attention to the speech of children, since it has been found that children who speak two languages start to mix languages in their speech in early childhood.

Most of the recent literature on codeswitching in children's speech focuses on children in the elementary grades, and much of this literature concerns the bilingual speech of children within the classroom (Jacobson, 1976; Zentella, 1978; Valdez-Fallis, 1978; Gonzalez & May, 1980).

Procedure

In our work as part of the Bilingual Reading Study, we have up to this point focused on describing the bilingual discourse of children in kindergarten through grade two. The total sample for this substudy consists of 24 children. Fourteen of these children are from a school district in the Rio Grande Valley of Texas, and ten of the children are from two school districts in the border area of southwestern Texas near the city of El Paso. These latter children are at times, treated as a single group for comparison purposes due to the very close proximity of the two school districts and the similar environment and background of these ten children.

Seven of the children from the Rio Grande Valley school district, hereafter referred to as District A, were in the first grade at the time the data was collected; the other seven children were in second grade. In the southwestern Texas school districts, hereafter referred to as Districts B and C, four of the children were in kindergarten and six were in the first grade during the same time period.

All of the children in the study were taped in three communication settings: in the classroom, in the home, and on the playground. An examination of the patterns of codeswitching of the children during the first year of the study (Espino & Domínguez, 1980) revealed that 50% of the children's mixed utterances occurred on the playground, rather than in the home or in the classroom. Since the playground setting appeared to be the most productive for the study of language mixing in the children's speech, it was decided to focus our attention entirely on the playground tapes for the second year report.

As in the study of the first year data, the present analysis uses the utterance as the basic unit of speech. The utterance, in most cases, corresponds to a single turn of talk. The terms "code-switched" and "mixed" are used synonymously throughout this report to describe all instances of speech behavior where English was alternated with Spanish, either within an utterance or between utterances. All bilingual discourse was analyzed as either lexical, phrasal, or sentential code-switching. A single word (or words in the case of a proper noun or formulaic expression) from one language which was inserted into a grammatical frame of the other language was considered a lexical switch. These were nouns, adjectives, adverbs, etc. of one language, usually English, which were inserted within a Spanish utterance. Few instances were found in which Spanish words were inserted into an English utterance. A phrasal switch consisted of the substitution of a phrase (prepositional, nominal, verbal) within an utterance. A sentential switch consisted of a complete utterance (sentence) from one language which was inserted between two utterances of the other language or when a complete utterance in one language followed an utterance in the other language within a single turn. Alternation of languages between speakers was not included in the analysis.

Results of the Analysis

The analysis examined (1) the frequency of codeswitching between children from two different border areas in the state of Texas, (2) differences in extent of codeswitching by a group of children over a two-year period, (3) differences in the extent of language mixing as a function of age/grade level, and (4) the type of language mixing produced by the children over time and by region of the State.

Differences in Frequency of Codeswitching as a Function of Region

As has been pointed out in the previous paper, the children in the three districts differ in the extent to which English and Spanish is used on the playground. As can be noted in Table 1, the children in our subsample also differ in the extent to which language mixing occurs in that setting. Codeswitching appears to be more prevalent in the speech of the children in the school district in the Rio Grande Valley (District A) than it is in the speech of the children from the two districts in the El Paso area.

Differences in Extent of Codeswitching over a Two-year Period

Speech data on the children from District A span a two-year period. The fourteen children in the present study were in kindergarten and grade one in Year One (1978-1979) and in grades one and two in Year Two (1979-1980). It should be noted that these fourteen children comprised part of the sample reported on by Espino and Dominguez (1980) in the Year One report. Data on these children provide a two-year longitudinal view of developmental features of codeswitching behavior. As can be noted in Table 2, considerably more codeswitching occurred in the speech of these children in Year One of the study than it did in Year Two. Notice that after one additional year of schooling for the children at those grade

levels the group as a whole tended to use more "all Spanish" utterances as well as more "all English" in their speech.

Table 1

Classification of Utterances Produced by the Combined Group of Students from Districts A, B, and C in Year Two (1979-1980)

	District A	District B	District C
English	16% (237)	67% (298)	56% (228)
Spanish	76% (1108)	31% (135)	39% (157)
Mixed	8% (112)	1% (5)	5% (19)

Table 2

Classification of Utterances Produced by Target Students from District A in Year 1 (1978-1979) and Year 2 (1979-1980)

	Year 1 (1978-1979)	Year 2 (1979-1980)
English	13% (102)	16% (257)
Spanish	65% (498)	76% (1108)
Mixed	22% (166)	8% (112)

Differences in Extent of Language Mixing as a Function of Age/Grade Level

While codeswitching is negligible in the speech of the children in this study (accounting for only 6% of the total utterances), a trend appears to be emerging in respect to age/grade level. First graders in both regions of the state tended to codeswitch more than did the kindergarteners, and second graders tended to do more codeswitching than did the first graders (see Tables 3 and 4). As the children develop more proficiency in English and move on into other stages in their native language and social development, we would expect to see more codeswitching occurring within peer groups.

Table 3

Classification of Utterances Produced by the Target Children
from District A by Grade Level in Year 2

Grade	English	Spanish	Mixed
1st	8% (52)	86% (555)	6% (42)
2nd	23% (185)	68% (553)	9% (70)

Table 4

Classification of Utterances Produced by the Combined Group of
Target Children from Districts B & C by Grade Level in Year 2

Grade	English	Spanish	Mixed
K	85% (325)	14% (53)	1% (4)
1st	43% (193)	53% (239)	4% (20)

Type of Language Mixing by the Children Over Time and by Region of the State

The type of language mixing produced by the children in both regions of the state is overwhelmingly lexical in nature. Notice in Table 5 that lexical codeswitching accounts for the majority of the mixed utterances not only in kindergarten and grade one, but in grade two as well. Sentential switching occurs at all grade levels but not with as much vitality as does lexical switching. Phrasal switching is negligible, at this point, and is found only occasionally in the speech of six of the children. Our data reveal only two instances of phrasal switching by kindergarten; four instances at grade one, with the remaining nine instances occurring at grade two.

Table 5

Types of Mixed Utterances Produced by the Composite Group of Target Children from District A and Districts B and C in Year 2

	District A		District B & C
	Year 1 (K - 1)	Year 2 (1 - 2)	Year 2 (K - 1)
Lexical	64% (59)	78% (104)	55% (23)
Sentence	30% (28)	16% (21)	43% (18)
Phrase	5% (5)	6% (8)	1% (1)

Summary

In summary, codeswitching did not occur with great frequency in the speech behavior of the children in our study. Regional differences were found in the extent to which codeswitching occurred in the speech of the children from the three communities studied. However, no differences were found in the type of language mixing used by the children as a function of region. Age and/or level of skill in both English and Spanish may be related both to the extent and type of codeswitching which occurs.

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