ABSTRACT
        This paper examines the formal and functional
properties of code-switching among Mexican-American children. Two
formal types of code-switching, code-mixing and code-changing, are
identified, and developmental patterns in their use are discussed.
Two major functional types of code-switching are also differentiated.
The first, situational code-switching, is discussed in terms of four
parameters: participants, topic, discourse type, and setting. The
second, stylistic code-switching, is subdivided for discussion into
code-switching which takes place to mark: (1) emphasis, (2) focus,
(3) elaboration, (4) clarification, (5) attention attraction or
retention, (6) mode shift, (7) topic shift, and (8) addressee shift.
The discussion of functional types of code-switching includes the
presentation of a few broad developmental trends. (Author)

CENTER FOR THE STUDY OF READING

Technical Report No. 44

ASPECTS OF CODE-SWITCHING IN THE DISCOURSE OF
BILINGUAL MEXICAN-AMERICAN CHILDREN

Erica F. McClure

University of Illinois at Urbana-Champaign

April 1977

University of Illinois
at Urbana-Champaign
1005 West Nevada
Urbana, Illinois 61801

Bolt Beranek and Newman Inc.
50 Moulton Street
Cambridge, Massachusetts 02138

Abstract

In this paper we examine the formal and functional properties of code-switching among Mexican-American children. Two formal types of code-switching, code-mixing and code-changing, are identified and developmental patterns in their use are discussed. Two major functional types of code-switching are also differentiated. The first, situational code-switching, is discussed in terms of four parameters: participants, topic, discourse type, and setting. The second, stylistic code-switching is subdivided for discussion into code-switching which takes place to mark: (1) emphasis, (2) focus, (3) elaboration, (4) clarification, (5) attention attraction or retention, (6) mode shift, (7) topic shift, and (8) addressee shift. The discussion of functional types of code-switching includes the presentation of a few broad developmental trends.

0.  Introduction.  Although multilingualism has existed since an-
tiquity, it is only in the past two decades that scholars have paid more
than cursory attention to the significance of the multilingual's al-
ternation among languages. Most research has been concerned with the
sociolinguistic parameters of code-switching, with specifying the
conditions under which each language is selected (vide e.g. Rubin, 1962;
Ervin-Tripp, 1964; Gumperez, 1964; 1970; Blom & Gumperz, 1972; Gumperz &
Hernández-Chavez, 1972; Hymes, 1972). As the early studies tended to
consider factors such as setting, topic, and participants which were
unlikely to change within a turn of speech, much less a sentence, the
grammatical parameters of code-switching were largely ignored. Conse-
quently as late as 1975 we find in the literature such a statement as:

> The variety found in these sixteen citations
> suggests that there are perhaps no syntactic
> restrictions on where switching can occur....
>
> (Lance, 1975: 143).

Today, concommitant with the interest in stylistic functions of code-
switching (vide e.g. Gumperz, 1970; Blom & Gumperz, 1972; Gumperz &
Hernández-Chavez, 1972; McClure & Wentz, 1975; Wentz, 1976) which may
occasion intrasentential code-switching (vide e.g. Annamalai, 1971;
Gumperz & Hernández-Chavez, 1972; Gingrás, 1974; Kachru, 1975; Wentz &
McClure, 1976a; Wentz, 1976; Pfaff, 1976; Sridhar, 1978). Thus a sub-
stantial data base is now being developed on both the formal and functional
aspects of code-switching. Yet a gap remains.

Little has been written about code-switching among children. This
paper addresses that topic. Both linguistic and sociolinguistic parameters
of code-switching will be considered. The analysis is based on tape re-
cordings of children ranging in age from three to fifteen. Complete
verbal transcripts of ninety hours of tape were situationally annotated
and divided into conversations and turns of speaking. Those containing
code switches were examined for communicative intent and grammatical
structure.

. Tape recordings were made in two communities. In the first community, a small city of about 45,000 inhabitants, eight, three and four year old Mexican-American children enrolled in a Headstart program were observed in school for six months. In the second community; a small town of about 1,400 inhabitants, the thirty-nine Mexican-American children enrolled in Kindergarten through fourth grade during the two year period of research plus three pre-school children who were in the care of older children in the sample, were observed at school, at home, in the local park and in the project mobile home.

1. The communities. Since social structural variables affect language selection patterns as Barker (1972) and Blom and Gumperz (1972) among others note, we include here a very brief description of our research sites. The Mexican-American community in the small city numbers approximately 2,200. This population is settled out, employment being largely in the local canneries. Most families are concentrated in the eastern section of town, almost all in public housing. The children are concentrated in the neighborhood elementary school where they constitute a large portion of the enrollment. There is little interaction between the Mexican-American community and the Anglo community and not much more between the Mexican-American community and the Black community, although the two communities are geographically intermingled. The Mexican-American community is itself relatively cohesive despite the diverse origins and varying educational and residential histories of its members.[2]

. Mexican-Americans constitute about ten percent of the population of the small town and Anglos, the remaining ninety percent. The former are divided into two groups--settled out families who are more or less permanently resident and migrant men. There is no barrio nor are there residential clusters. Instead the Mexican-Americans are dispersed throughout the entire community with the exception of one newer section with only high cost housing. Two local nurseries are the main source of employment for the Mexican-Americans.

Social activity in the community focuses around the churches and schools. There are several churches in town but no Catholic church. The minister of one congregation wished to allow the Catholic priest from the neighboring town to conduct services in his building, but his congregation opposed the arrangement. Consequently since most of the Mexican-Americans are Catholic, they must travel four miles to the next town for services. Most attend irregularly.

Athletic activities at the high school (grades five through twelve) and student performances at both the high school and the elementary school (Kindergarten through fourth grade) are major social events for the community. However in general the Mexican-American community is only peripherally involved in these activities. Only one Mexican-American boy[3] was a member of a varsity sports team. He and his family participated fully in the round of activities surrounding the football season; but the other Mexican-American families generally do not. Indeed most have very negative feelings toward the high school. The high school drop out rate stood at 100% at the time of our research, no Mexican-American having graduated.

In 1972 a bilingual pull out program was begun in the elementary school.[4] The children of all but two of the Mexican-American families were enrolled in it.[5] During the course of our research, the program sponsored a yearly Mexican-American culture day featuring music, dance, and food. It was the only event we witnessed in which large numbers of Anglo and Mexican-American adults participated jointly.[6] Even on this occasion there was little interaction between the two groups.

While Mexican-American and Anglo children in grades K through four play together at recess and interact in class, there is a tendency for same ethnicity play groups to form frequently, especially in the case of those children whose English is limited. Interaction between Anglos and Mexican-Americans is much more restricted at the high school.

Outside school few of the Mexican-American children interact often with Anglos even though residential patterns are such that they have Anglo neighbors. There is little interaction with other Mexican-American children either. Indeed elementary school children play primarily with siblings after school. This fact is partially explained by the dispersal of the Mexican-American families throughout the community but also relates to the lack of social cohesion in the Mexican-American community. This Mexican-American community, unlike that of the city has neither well-established leadership nor any community-wide social institutions.

2. Syntactic constraints on code-switching. In discussing code-switching, many authors have attempted to differentiate it from other phenomena resulting from language contact. Thus, Haugen differentiates among three degrees of convergence:

1. Switching, the alternate use of two languages;

2. interference, the overlapping of two languages; and

3. integration, the regular use of materials from one language in another, so that there is no longer either switching or overlapping, except in a historical sense (1956: 40).

and Gingrás states:

It is not always obvious whether we have an instance of code-switching or of some sort of lexic lization (i.e. borrowing)...I reserve the term "substitution" for what an individual does and the term "lexicalization" for what speakers of a dialect may have done... It should also be pointed out that in dealing with observational data, it is difficult to sort out problems of various kinds due to inference between the two codes. Since interference appears to be a result of performance factors (assuming we have the case of a coordinate bilingual who can keep his two codes fairly separate, I will also try to ignore cases of bilingual

interference, since I have no interest in performance factors at this time.

> Consequently, in studying code-switching, I have
> tried to concentrate only on those cases where it is
> obvious (at least to me) that we have an instance of
> code-switching (1974: 169-170).

On the other hand, Pfaff concludes that rather than segregating language contact phenomena it may be advantageous to study their inter-play:

> While the distinctions should not be obscured, all
> "these can be considered as alternative realizations
> of underlying meanings and can be tabulated and
> quantified as such (1975: 17).

It is this position that we shall adopt here.

Pfaff (1975: 5) suggests a classification of three general types or styles of code-switching defined by form and function. The first type, "typical of casual interaction between peers, close friends, or regular associates when conversation centers around every day topics," is char-acterized by switches occurring either at surface sentence breaks or at independent or dependent clause breaks. One or two word lexical switches are low in frequency. Type two "is typical of casual or more formal inter-actions which for one of several reasons, seem to be mainly in Spanish. Whole sentence switches are much more frequent than switches as dependent or independent clauses." The third type is basically Spanish street talk, "the jargon of the 'bato loco.'" Switching to English is mainly for single nouns, verbs, adjectives and set phrases."

Our data support a different classification, bipartite as opposed to tripartite. The children's code-switching appears to reflect the oper-ation of two separate linguistic devices: code-changing and code-mixing.

Code-changing, generally motivated by situational and stylistic factors, is the alternation of languages at the level of the major con-stituent (e.g. NP, VP, S). The code-change is a complete shift to another language system. All function words, morphology, and syntax are

abruptly changed as in:

    1.  I put the forks en las mesas.

                   (cn the tables)

    2.  Let's see qué hay en el dos.

                 (what there is on two)

The vast majority of spontaneous code-changes in our data are at the surface structure sentence level. Of our corpus of over 500 code-changes, only 30[7] involved smaller constituents than sentences, of which nineteen were noun phrases. A disproportionate number occurred in narratives. Moreover only one occurred in the speech of a child under nine. Given that non-sentence code-changes appear to be much more frequent in the corpora of Lance, Gingrás and Pfaff, and that they can be elicited from all the children in sentence-imitation tasks, while random switches car not[8] it appears likely that the ability to use non-sentence code-changes productively is acquired relatively late by the child in the process of becoming bilingual. Our younger informants tode-changed relatively rarely. Another ability which appears to be developed late by these children is that of handling cross-language ellipsis. In the following examples, the first responses ($B_1$) are characteristic of the younger children, the second ($B_2$) of the older:

    3.  Speaker A: ¿Quién tiene hambre?

               (lit. Who has hunger?)

        $B_1$:  I do.

        $B_2$:  I am.

    4.  Speaker A: ¿Cuántos años tiene?

               (lit. How many years has he?)

        $B_1$:  He gots eight.

        $B_2$:  He's eight.

    5.  Speaker A:  Who are you calling?

        $B_1$:  El doctor.

           (the doctor)

> $B_2$: Al doctor.
>
> (to the doctor)

6. Speaker A: I don't care.

> $B_1$: Yo sí.
>
> (I yes)
>
> $B_2$: A mí sí.
>
> (to me yes)

The older children answer as if the previous utterance had been in the language of the response. The younger children's responses look as if they are relexicalizations of responses in the original language.[9]

Code-mixing, the other type of code-switching, is the individual's use of opposite language elements which cannot be considered to be borrowed by the community. It occurs when a person is momentarily unable to access a term for a concept in the language which he is using but can access it in another code or when he lacks a term in the code he is using which exactly expresses the concept he wishes to convey. Code-mixing of color terms by the children studied provides a good example of the former since detailed analysis shows that for these children color terms in Spanish and English have identical referential and affective meanings. The sentence:

7. No van a aceptar a una mujer que can't talk business

(They are not going to accept a woman who)

is an example of the latter type of code-mixing. "Can't talk business" is derived from an idiomatic unit in English which has for the speaker no precise, culturally appropriate Spanish equivalent. Sentences containing code-mixes are generally perceived by the children to be sentences of one language containing elements of the other, unlike those containing code-changes which are felt to begin in one language and change to the other.

Code-mixing takes place within constituents, and there is usually at some level an indication that the code-mixed item is marked for use in a sentence of another code. For example, in sentence seven above, the use of que instead of who to introduce the relative clause suggests that the

phrase is a code-mix and not a code-change while in 8, the noun

    8.  I put the tenedores on the table.

          (forks)

phrase "the tenedores" is marked for use in an English sentence by the article "the." The morphology and phonology of "tenedores" (/tenedor + es/) is entirely Spanish nonetheless. Consequently, it is unlikely that, among bilinguals, such an occurrence would represent a lexical borrowing. In the sentence:

    9.  I want a motorcycle verde.  (green)

we can say that the Spanish adjective "verde" is code-mixed into an English sentence. Spanish placement of "verde" indicates that it is not a borrowing. The noun phrase "a motorcycle verde" is marked by "a" as being an English noun phrase. It could not be used in a Spanish sentence, but "un motorcycle verde" could; in which case "motorcycle" might either be a borrowed or code-mixed noun.) Its status is ambiguous because there are no clear morpholigical or syntactic indicators. Phonology is only one clue in disambiguating the status of opposite language elements, because they often contain a mixture of Spanish and English sounds.

    While a word may caution phonemes of both languages, there are no examples in the children's speech of words containing morphemes of both languages. There are no code-mixes within a word. Derivational or inflectional affixes occur with a root of the other language only if it has been phonologically adapted (in Gingrás' terms, only if it is a substitution or lexicalization).

    Code-mixing seems to parallel borrowing in the relative frequency with which different syntactic categories are involved. Ornstein states:

        As has been noted, also among other contact cases,
        Raramuri, in common with other languages, tends to
        borrow nouns more readily than any other word class.
        Beyond this, loans from other categories are rare, al-
        though, as noted elsewhere here, closer investigation
        of existing calques needs to be performed. At any rate

the literature on borrowing appears to indicate that
adjectives tend to follow nouns in frequency, with
verbs often next, and other classes less well
represented (1976: 84).

Table One summarizes our data. They accord with Ornstein's comments about
regularities in borrowing except that there are only five code mixed verbs.
They also follow the pattern noted by Bloomfield:

In all cases...it is the lower language which
borrows predominantly from the upper (1933: 464).

Spanish sentences contain code-mixes far more frequently than English sen-
tences, and it is Spanish which is the lower language and English is the
upper.

In concluding our discussion of the syntactic parameters of the code-
switching of the children studied, we may note a developmental pattern.
Children[10] who do not have equal or near equal proficiency in both Spanish
and English code-switch predominantly at the word level. Most such
switches are of nouns but more than a negligible number of interjections
and color adjectives may also be found. Such children do little code-
changing and most is at the sentence level. Children who are fluent
bilinguals (in general the older children) code-switch predominantly at
the constituent level. However, for them also code-changing is mainly
of sentential level constituents. We should also note that there are
children who are competent bilinguals but who virtually never code-
switch, and that one of the younger girls code-switches almost incessantly.
Table 2 summarizes our data on code mixing and code-changing by age.

3. Code selection and situation. In verbal interaction, language
selection by adult bilinguals has been shown to be partially determined
by participants, setting, and topic. Participants and topic have also
been found to be important in the register variation of monolingual
Anglophone children (Fischer, 1958; Weeks, 1971). Among the children we
studied, it appears that the earliest systematic code-switching is a
function of the category "participants." Such switching occurs not only

Table 1

Code Mixing by Matrix Language and by Age

| in Spanish sentences | informants* jr | sr | total | in English sentences | informants jr | sr | total |
|---|---|---|---|---|---|---|---|
| **Nouns** | | | | | | | |
| $(Ind\ Art)_S + (N)_E$ | 18 | 1.0 | 28 | $(Ind\ Art)_E** + (N)_S$ | 3 | 0 | 3 |
| $(Def\ Art)_S + (N)_E$ | 21 | '2 | 33 | $(Def\ Art)_E + (N)_S$ | 3 | 0 | 3 |
| $(Poss\ Adj)_S + (N)_E$ | 21 | 8 | 29 | $(Poss\ Adj)_E + (N)_S$ | 2 | 1 | 3 |
| $(Dem\ Adj)_S + (N)_E$ | 3 | 0 | 3 | $(Dem\ Adj)_E + (N)_S$ | 1 | 1 | 2 |
| $(Numeral)_S + (N)_E$ | 0 | 3 | 3 | $(Numeral)_E + (N)_S$ | 0 | 0 | 0 |
| $(Prep)_S + (N)_E$ | 6 | 7 | 13 | $(Prep)_E + (N)_S$ | 0 | 0 | 0 |
| $(Art)_S + (Adj)_E + (N)_E$ | 3 | 4 | 7 | $(Art)_E + (Adj)_S + (N)_S$ | 0 | 0 | 0 |
| $(Prep)_S + (Adj)_E + (N)_E$ | 0 | 2 | 2 | $(Prep)_E + (Adj)_S + (N)_S$ | 0 | 0 | 0 |
| $(Adj)_S + (N)_E$ | 7 | 2 | 9 | $(Adj)_E + (N)_S$ | 0 | 0 | 0 |
| **Adjectives** | | | | | | | |
| $(Adj)_E$ | 9 | 2 | 11 | $(Adj)_S$ | 0 | 1 | 1 |
| $(Adj-color)_E$ | 20 | 8 | 28 | $(Adj-color)_S$ | 0 | 0 | 0 |
| **Verbs** | | | | | | | |
| $(Verb)_E$ | 2 | 0 | 2 | $(Verb)_S$ | 1 | 2 | 3 |
| **Adverbs** | | | | | | | |
| $(Adv-place)_E$ | 1 | 3 | 4 | $(Adv-place)_S$ | 0 | 1 | 1 |
| $(Adv-time)_E$ | 1 | 2 | 3 | $(Adv-time)_S$ | 0 | 2 | 2 |
| **Conjunctions** | | | | | | | |
| $(Conj)_E$ | 0 | 0 | 0 | $(Conj)_S$ | 1 | 5 | 6 |

Table 1 (continued)

Others

| (Interjection)$_E$ | 7 | 4 | 11 | (Interjection)$_S$ | 5 | 4 | 9 |
| (Epithet)$_E$ | 1 | 2 | 3 | (Epithet)$_S$ | 3 | 0 | 3 |

total code mixes

| | | | | | | |
|---|---|---|---|---|---|---|
| 138 | 75 | 213 | | 22 | 22 | 44 |

*Informants are ranked as junior or senior on the basis of their linguistic maturity. Junior informants are those born after 12/30/66, while senior informants were born before 12/31/66, except that one informant (born 5/14/68) is classified as a senior despite his age.

**Nouns occurring with a zero article are classified as neither code mixing nor code changing since it cannot be determined which they are.

Table 2

Code-Mixing and Code-Changing by Age and Language

informants

| | junior | | | senior | | | | Total |
|---|---|---|---|---|---|---|---|---|
| code-mixing | Sp | Eng | Total | Sp | Eng | Total | | Total |
| sample | 138 | 22 | 160 | 75 | 22 | 97 | | 257 |
| percent | 54% | 9% | 62% | 29% | 9% | 38% | | 100% |
| code-changing | | | | | | | | |
| sample | 15 | 10 | 25* | 59 | 56 | 115 | | 140 |
| percent | 11% | 7% | 18% | 42% | 40% | 82% | | 100% |

*One junior informant (born 11/3/67) was omitted as her speech differs markedly from that of the other junior informants as regard code-changing. She produced 52 code-changes in the material sampled, which changes the junior-senior rates to 40% vs. 60% instead of 18% vs. 82%.

at junctures between conversations but also between and within turns of
speaking. Examples of the latter two types are:

    10. CS (girl, 7) "I want to play checkers."

        E (Anglo researcher) "Ask Roli if you can."

        CS: "Puedo jugar checkers?" (to boy, 4)

          (Can I play checkers?)

    11. P (girl, 9): "You have to king me."

        D.(girl, 6): "Do what?"

        P:         "You gotta put one on top."

               .Mira, cómete éste. (to boy, 4)

               (Look, eat this)

Three characteristics of participants are important: language proficiency,
language preference, and social identity.

    Inappropriate choice of language when addressing a monolingual is
rare. For example, although upon first entering school, children with
little prior experience with the Anglo community occasionally used Spanish
with Anglophone school teachers and pupils, such behavior was no longer.'
observed after their first month of classes. Children lacking even mini-
mal facility in English quickly resorted to one of two strategies: si-
lence and passivity or the use of non-verbal communication devices such
as gesture to supplement one or two word telegraphic utterances. In de-
termining whether it is possible to use a particular language with an
individual, young children appear to rely on binary judgments of lin-,
guistic competence--either a person knows a language or he does not.
Assessments of relative ability do not enter into their decision about
language choice as they tend to do among adults and older children. Thus,
those children five or younger who were Spanish dominant spoke to the
author in Spanish, .the language in which they were most comfortable des-
pite the fact that in most cases their English was more fluent than her
Spanish. Older children make finer discriminations in selecting a code
for use with a given individual. They seem to consider both the

absolute degree of the hearer's proficiency in both languages and the
relative language proficiencies of speaker and hearer.  The older
children in the second group studied used English almost exclusively in
interacting with the author and Spanish almost exclusively in interacting
with the four children of the group whose English was rudimentary.

Assessments of language facility also appear to account at least
partially for the fact that with pre-schoolers, older children use
Spanish predimonantly.  However, as this pattern obtains even in the case
of the one pre-schooler in the second group who is equally proficient in
Spanish and English, it would appear that the social identity[11] pre-schooler
is also a factor.  A random selection of fifteen one-hour recordings
contained 188 utterances directed to pre-schoolers, 67% of which were in
Spanish.  The English addressed to pre-schoolers is generally restricted
to short, routinized expressions, while Spanish is used for most utter-
ances with high information content.  Siblings of pre-schoolers tend to
address more English to them than do other children.  In our corpus, 43%
of the 118 utterances addressed by siblings to pre-schoolers were in
English.  Only 22% of the 70 utterances addressed by non-siblings to pre-
schoolers were in English.  Perhaps in interaction among siblings the
social identity pre-schooler is not always salient. Other identities
such as sibling, may take precedence or identity itself may not be
salient and code-selection may be more strongly influenced by other
factors.

. A good illustration of the fact that language preference and not
merely ability is an important consideration of the fact that in the
second community one child who is quite fluent in English but prefers
Spanish is addressed far more frequently in Spanish than are her peers
who prefer to use English.  Furthermore, even the very young Spanish
dominant children use English in addressing a young girl who, despite
the fact that she knows Spanish, refuses to use it with anyone but a
monolingual.[12]

Social identity is the third property of participants which in-
fluences language choice. There appears to be a characteristic pattern
of language use associated with every identity relationship.[13] In most
families, child-parent interactions take place in Spanish. Interactions
between children and adults from the Mexican-American community also
take place in Spanish.

For teacher-pupil interactions, English has been established as the
appropriate language. The advent of a bilingual-bicultural program in
1972 complicated the situation. The instructors in this program were
a female Anglo teacher and a Mexican-American teacher's aide, both
fluent bilinguals. The former has had great difficulty in sustaining
conversations in Spanish with children who know English, especially those
who began school before the bilingual program started. The latter has
not; although children occasionally address her in English (see Table 3).
The difference may be that there is an alternate identity relationship,
child-Mexican-American adult, associated with the use of Spanish which
can obtain between the children and the teacher's aide. The corres-
ponding relationship between the children and the teacher, child-Anglo
adult is associated with the use of English.

With the researchers, Anglos and Hispanos alike,[14] who attempted
to define for themselves an identity outside the children's previously
established categories, the children generally used a mixed register in
which discourse alternated between Spanish and English with frequent
code-mixing and code-changing. However, when interactions with them
were defined in terms of identities such as Mexican-American adult or
or Anglo adult, code-switching was minimal.

Identity also affects language choice in interactions among children.
Shifting identity relationships among children are often marked by code
alternation just as Blom and Gumperz (1972) have demonstrated among
adults. Both peer and sibling interactions are carried on in a mixed
register. Interactions between children which involve caretaker-child
relationships are almost always in Spanish. We observed that if a

younger child were hurt, he was comforted by an older child in Spanish
even though an immediately preceding interaction between the children
might have taken place in English. The following sequence is typical:

12. P (girl, 9): "Stop it Roli. You're stupid!"

     R (brother, 3): "You stupid Pat."

     P:          "Don't hit me!" (laughing and holding R off)

     R:          (trips and begins to cry)

     P:          "Ay, Roli! Mi hijito ¿qué pasó?·
                 (Oh, Roli! Honey what happened?)

Likewise, we found that when children assumed a position of authority
they issued commands in Spanish. Thus, when one of our research as-
sistants went by herself to collect data from a group of children in the
project mobile home, rather than as usual in the company of several other
researchers, one of the older boys spontaneously assumed the role of the
one responsible for keeping order among the rest. His orders in this
role were issued in Spanish. It would appear that behavior in the
caretaker-child relationship is patterned after that between parent and
child. Children at play have also been observed to switch from Spanish
to English when switching from a peer relationship to a teacher-pupil
relationship.

Language alternation to mark a shift in identity relationship is,
of course more common among older children than among younger children
since the former have access to more identities. We found that as
children become older their knowledge of English increases and so does
the number of English-associated identity relationships accessible to
them. Thus their use of English increases. Since in the children's
culture English is less commonly used in those relationships in which
females may participate (most being associated with the home) than in
which men participate, the sex difference between the amounts of English
and Spanish used by the children in free conversation (see Table 3) is
not surprising.

Table 3

Percentages of Spanish and English Used in Various Contexts

| | English | Spanish | English with Spanish Elements | Spanish with English Elements | Changes at sentence boundary | Changes within sentences |
|---|---|---|---|---|---|---|
| Interview-Family A (only the children control any English) | 9% | 90% | 0% | 0% | 1% | 0% |
| interview-Family B (adults and children control English) | 40% | 41% | 0% | 2% | 17% | 0% |
| bilingual classroom (Anglo teacher only) | 61% | 10% | 0% | 10% | 16% | 3% |
| bilingual classroom (Mexican-American teacher's aide) | 4% | 95% | 0% | 1% | 0% | 0% |
| regular Kindergarten | 90% | 7% | 1% | 0% | 1% | 1% |
| boys** at project mobile home (interview situation) | 17% | 72% | 4% | 3% | 3% | 0% |
| girls at project mobile home (interview situation) | 2% | 91% | 0% | 7% | 0% | 0% |
| boys at project mobile home (free conversation) | 78% | 22% | 0% | 0% | 4% | 0% |
| girls at project mobile home (free conversation) | 60% | 31% | 2% | 1% | 5% | 1% |

**Girls and boys came to the project mobile home at different times. Our data thus lack interactions between the sexes.

*Figures may not add to 100% due to rounding.

The topic of a discourse does not have as large an influence upon language selection/in the children studied as does who is present. The children are able to and in fact do converse about anything in their experience in both languages. However, the discussion of a few topics is more likely to occur in one language than in the other. Topics related to the family-child care, kinship, and food preparation are most often discussed in Spanish; whereas sports, school, and holidays such as Halloween and Thanksgiving are more often discussed in English. When a topic which is habitually discussed in one language happens to come up in a conversation in the other language, there is a high incidence of code-mixing and code-changing.

Discourse type also affects language use. The greatest degree of code-switching is manifested in free conversation. In general code-switching is strongly inhibited in interrogation,[15] and narration.[16]

Setting is the last situational variable clearly involved in language choice. But like the other variables it alone does not determine choice. Thus while Spanish is used with greater frequency in the home than in any other place,[17] English is also heard there--more in the case of some families, less in the case of others. Similarly, while English is the only language of instruction and response in the school outside the bilingual classrooms, interactions among Mexican-Americans in the classroom and on the playground are often in Spanish. The community park and project mobile home, the other settings in which observations were made, appeared to be neutral with respect to language choice. The interaction of the variables, participants, topic, setting, and discourse type account for the data presented in Table Three which is based on a stratified random sample consisting of ten percent of the transcribed corpus.

The catagories topic, participants and setting are useful analytic constructs which have enabled the author to account for a large proportion of code selection behavior. It is probable that at least the categories topic and participants also have some psychological validity for the subjects studied, since metalinguistic comments concerning these categories

have been recorded. Examples are provided below:

    13. F (boy, 4): "¿Cómo es que hablas como nosotros?" (to Anglo

                        bilingual elementary school teacher)

                        .(How come you talk like we do?)

    14. E (boy, 10):    "In English or Spanish?"

        J(Anglo

        researcher)    "En español si puedes."

                  (In Spanish if you can.)

        E:            "Aw, I can't tell that in Spanish."

        J:            "Just try, OK?"

    4. Code-Selection and Style. Gumperz and Hernandez-Chavez (1972)
have shown that code-switching has a stylistic function for adult bilinguals.
Our data suggest that style is also a very relevant parameter for analyzing
the code switching of children. We have found that children's code
switching may serve the following stylistic functions:

    4.1 Emphasis. Code-switching for emphasis may occur from Spanish
to English or from English to Spanish. The majority of code-switches in-
volve commands. Sixteen of our corpus of seventy-four code-switched com-
mands involve repititions of commands in translation. Sentence 15 is an
example:

    15. P (girl, 9): "Stay here, Roli. Te quedas aquí!"
There are seventeen switches for commands which begin new turns of
speaking:

    16. R (boy, 4): I go get it.

        P (girl, 9): Hazte, hazte pa' allá!

                (Get over, get over there )
The remainder are switches or commands within a turn of speaking:

    17. C (girl, 7): Who is that? ¡Pégalo!

                   (Hit him)

    Below are examples of emphatic code switches which are not commands.
There are only six which seem clear cut in our entire corpus. All involve
translations.

18. T (boy, 8): Yo soy segundo. I'm second!

19. R (girl, 9): Ya acabé, I'm done!

20. C (girl, 7): I can't do it. No puedo!

4.2 Focus. Focus is here used to refer to the bringing into prominence of a sentence, in contrast to emphasis here used to apply to the entire sentence. One method of focusing upon a portion of the meaning of a sentence is topicalization. Code-switched topicalized subjects of the type illustrated in 21 below are perhaps used to indicate the ethnicity of the individual who is being discussed. In our data all examples of code-switched topicalizations were Spanish phrases in otherwise English sentences.

21. E (boy, 8): "Este Ernesto, he's cheating."
(This Ernest)

Other examples of focus are:

22. J (boy, 7): "Pegó right there." (He hit...)

23. C (girl, 7): "Come on give me towel, la toalla."

4.3 Elaboration. Occasionally code-switching is used when a child wishes to repeat a message including additional information. Examples are:

24. R (girl, 7): "Yo lo puedo quebrar. Yo lo también...
lo pu(edo) quebrar.
I can break this easy with my nose."
(I can break it. I can break it too...)

25. P (girl, 9): "Roli you stay here. Tú quédate 'jito con
Suzy"
(Stay with Suzy honey)

4.4 Clarification. The repetition of an utterance in translation appears to function as a means of resolving ambiguity or clarifying a potential or apparent lack of understanding.

26. P (girl, 9): " ¿Qué tiene?...Will you watch your cards!
¡Fíjate en las cartas!" (to boy 3, who
knew little English)

(What does he have?...(...)Watch the cards!)

27.  C (girl, 7):       "You(r) dog."

     J (Anglo Res):     "You dog?  My woof?"

     C         ..:       "You(r) dog!  Tu perro!"  (Your dog!)

     J          :    ,   "OK.  What about him?"

28.  I (Anglo Res):     "¿Dónde fuiste?"  (Where did you go?)

     R (boy, 3)  :      "A school."  (To school.)

     I           :      "Huh?"

     R           :      "A (la) escuela."  (To school.)

    4.5  Attention Attraction or Retention.  Within a conversation a child
may use a code-switch as a device to attract or retain the attention of
his audience.  It seems likely that such code-switching serves the same
function as a raised voice, address forms, gestures, physical contact or
eye contact.

29.  M (girl, 9):   "Now let me do it.  Put your feets down.

                     Mira!  (Look!)  It's Leti's turn again.

                     Hi Leti!"

30.  M (girl, 9):   "Yo me voy a bajar, Teresa.  Look!"

                     (I'm getting down...)

Still other cases appear to be a means of avoiding the tedium or insis-
tence caused by multiple repetition.  This type of repetition in trans-
lation has the impact of a paraphrase, not a repetition.

31.  P (girl, 9):   "A ver, a ver...let me see, let me see."

                     (Let me see, let me see....)

32.  R (girl, 7):   "Este es el roof.  This the roof.  This is

                     the roof."

                     (This is the roof....).

    4.6  Mode shift.  Children's discourse includes narration, commentary,
soliliquy, interrogation, etc.  Code-switching sometimes marks a point of
transition between these modes.  For example, code-switching frequently
occurs when a child interrupts a story he is telling to make a comment ex-
ternal to the narrative.

33.  T (Researcher):    "Tell me a story."

     S (girl, 5)    :    "I know a story of pigs and I know a
                         story of Wizard of Oz."

     T              :    "The Wizard of Oz?  OK.  Tell me whichever
                         one you like."

     S              :    "OK.  (takes a deep breath) Así no va.
                         Espérate.  (Not that way.  Wait.)  Oh,
                         Sonny and Cher, OK?"

     T              :    "OK."

     S              :    "Sonny and Cher, it was raining and then
                         Sonny and Cher broke his window..."

34.  T (boy, 8)     :    (final sentence of story told in Spanish)
                         ...respiran las llantas del tren, y ...
                         that's all I could think."
                         (...the train's tires breathe, and...)

35.  J (Anglo Res)  :    "¿Dónde vive María?"
                         (Where does María live?)

     C (girl, 7)    :    "María vive en mi casa."
                         (María lives in my house.)
                         Really she is.

36.  Ev (boy, 8)    :    "Lo pegó aquí.  I saw it."
                         (He hit him here.)

Similarly, children often code switch when interrupting a conversation
with a self-directed or rhetorical statement.

37.  R (girl, 7)    :    "You love boys!"

     J (Researcher):     (feigns crying)

     R              :    "Why you cry baby.  Está llorando."
                                             (He's crying.)

38.  L (girl, 5)    :    "Mira mi (hi)jito.  La leche de tu mamá.
                         Oh, darn, now what!"
                         (Look, honey.  You mom's milk.)

Children also switch code when moving out of an interrogative mode as in the following example:

39. J (Anglo Res)    :    "¿Ése es Tibaldo o David?"

(Is that Tibaldo or David?)

40. E (boy, 12)    ·    "Este es me Davi.  I'm going to beat him up."

(This is my Davi.)

4.7 Topic Shift.  Code-switching to introduce a new topic is another linguistic device used by the children.  They appear to use such a switch to emphasize the fact that they are no longer interested in what is presently being discussed and wish to proceed to a different topic.  Examples are:

41. T (Mexican-American

Researcher)    :    "Dile que es una casa sin techo."

(tell her that it's a house without

a roof)

L (girl, 6)    :    "We have a pretty, uh, Christmas tree."

42. H (girl, 13)    :    "Me duela la muela."

(My molar hurts)

R (girl, 9)    :    "Remember when we eat dinner over there

at my house, we drink soda."

43. R (boy, 4)    :    "¿Y dónde mis rabbits?"

(And where my rabbits)

L (girl, 6)    :    "Ahí están.  Les están dando comida."

(There they are.  They are giving them

food)

D (girl, 6)    :    "Yo les voy dar comida al pájaro y..."

(I will give food to the bird and...)

R    :    (will) you (be) playing (checkers)?

D    :    "Yeah, she's gonna wash her hands."

4.8    Addressee Shift.  We have already discussed the fact that the characteristics of his addressee influence a child's language selection. If he switches addressees and the relevant characteristics of the new

addressee are different from those of the previous addressee, a language
switch is common. However, sometimes the relevant characteristics re-
main the same with an addressee switch yet a language switch takes place.
It seems likely that such a language switch is sometimes used to help
clarify the fact that a new person is being addressed, thereby avoiding
the necessity of a later message such as "I'm not talking to you; I'm
talking to Maria." The following instance of code-switching appears to
have occurred for that reason:

44. H (girl, 13) : "Pregúntale a Patty. Pregúntale. (To Rosa)

(Ask Patty. Ask her)

"Wasn't I at the house? (to Patty)

We also find code-switching associated with a change in addressee when
there is an alternation between messages in the second person and messages
in the third person:

45. Cr (girl, 6) : "Mira, Rosa está sacando la lengua. (to Anglo res.)

(Look, Rosa is sticking out her tongue)

You like Jim; you like Jim. (to Rosa)

46. R (girl, 7) : Why you cry baby? (to Anglo researcher)

Está llorando. (to audience of researchers and

Mexican-American girls)

(He is crying)

Our data does not indicate a uniform developmental sequence in the use of
code-switching as a stylistic device. Some older children do not code-
switch at all for stylistic reasons in our data, while some younger
children do so frequently. Nevertheless, there appear to be some pat-
terns. There are only a few examples of emphatic code-switching by young
children. Perhaps, their paucity relates to the fact that most emphatic
code-switches involve commands. In our data there are few examples of
commands by young children as most of their recorded interactions were
with children older than they, where commands by the younger children were
defined as inappropriate. There are no examples of focal code-switching
by children under seven. Neither are there examples of elaborative

code-switching by children under seven. The latter fact seems strange·
as sentence elaboration or expansion within a language is a common
strategy of young children (vide e.g. Clark, 1974). One might expect
that such switching might at least occur going from English into
Spanish, the language the young children generally know best. Switching
to clarify a meaning by translation appears to be learned quite young.
We have many examples from three years olds. Likewise, switching to at-
tract or retain attention is learned early. The youngest child for whom
we have clear examples of code-switching to mark mode shift is five.
The switch marked a shift from the narrative mode to commentary. All our
examples of code-switching to mark topic and addressee shift came from
children at least six years old. Disregarding age, the commonest types
of stylistic code-switching were attention attraction and retention
followed by emphatic code-switching. The others were much less common.

    5. Conclusion. It is clear that the studied children's alternation
between languages is neither random nor the result of a linguistic deficit.
Their code-switching proceeds in accordance with grammatical and functional
principles. Socially based principles operating within their speech com-
munity permit these children not only to integrate one code into dis-
course being carried out in another (code-mixing) but also to alternate
the actual code of the discourse (code-changing). One purpose served by
this sophisticated use of linguistic signs is to identify individual bi-
linguals as members of a particular community. Code-switching for the
bilingual also functions to mark situational changes and stylistic ex-
pression, perhaps more clearly than does register alternation for the
monolingual. The adept use of code-switching by the bilingual can be
viewed as analogous to the creative use of language by a skilled mono-
lingual author or orator.

Note

Much of the analysis presented here was developed in collaboration with James Wentz. Earlier versions may be found in McClure and Wentz (1975), Wentz and McClure (1976) and McClure and McClure (1975).

Footnotes

[1] Within a language register variation by children has been discussed by, among others, Weeks (1971), Carlson and Anisfeld (1969), and Kernan (1974).

[2] Mexican-Americans have only recently settled in both the city and town discussed here. The adults' educational, linguistic, and residential backround varies from some college to a few years of elementary school. All adults speak Spanish, but the dialect or dialects vary. Their English varies from accented fluency to non-existence. Residential histories also differ widely. Some were born in the southwestern U.S., others in Mexico. Some have lived in other communities in the midwest and some have not.

[3] He is the son of the Mexican-American teacher's aide.

[4] It was discontinued at the end of the 1974-1975 school year when a decrease in the enrollment of Spanish speaking children took place.

[5] The parents were all concerned with their children's education especially with their acquisition of skills in English. In the case of two families, school authorities could not convince the parents that their children's participation in a bilingual, bicultural program would not hamper their acquisition of English.

[6] The Mexican-American women came to the school to prepare the food. For many it was a first visit. The Mexican-Americans did not participate in the PTA or other school based activities such as scouting.

[7]An additional thirty-three noun phrases consisting of unmodified nouns have not been included here as their status as code changes is ambiguous.

[8]For detailed analysis of the data from the elicited imitation tasks see McClure and McClure (1975), Wentz and McClure (1976a) and Wentz (1976).

[9]See Wentz and McClure (1976b) for a fuller discussion of cross-language ellipsis.

[10]All of the children studied began to acquire Spanish before English. Even in homes where siblings speak English, pre-school children are addressed primarily in Spanish. While a few of the children were proficient in both languages by age 5, the majority were strongly Spanish dominant on Kindergarten entry. Their acquisition of English was, however, quite rapid thereafter.

[11]Social identity is used here as in Goodenough (1969).

[12]The use of the term identity relationship also follows Goodenough (1969).

[13]This child's teenage siblings are, together with the teenaged children of the Mexican-American teacher's aide, the most integrated into the Anglo community. They use English almost exclusively even in the home, despite their parent's strong preference for the use of Spanish as the home language.

[14]The research staff included a female Mexican-American, a male Mexican-American, a female Puerto Rican, a female Peruvian, two Anglo males, and one Anglo female.

[15]Interrogation in English of the preschool children in the small city was an exception. The children often answered English questions with Spanish responses even when they are able to respond in English.

[16]Code-switching could, however, be artificially induced in narration by request. See McClure and Wentz (1976) for details.

[17]Interestingly, two siblings whose English was rudimentary used it more
freely at home than elsewhere.  They were the only English speaking
members of the household, and perhaps they felt less inhibited in
speaking English there because there was no one to note their
errors or difficulties.

## REFERENCES

Annamalai, E. 1971. Lexical insertion in a mixed language. In: Papers from the seventh regional meeting of the Chicago Linguistic Society. Chicago, Chicago Linguistic Society.

Barker, G. 1972. Social functions of language in a Mexican-American community. Anthropological Papers of the University of Arizona 22. Tucson, Arizona, The University of Arizona Press.

Blom, J. P. and J. Gumperz. 1972. Social meaning in linguistic structures: code-switching in Norway. In: Directions in sociolinguistics. Edited by J. Gumperz and D. Hymes. New York, Holt, Rinehart, and Winston.

Bloomfield, L. 1933. Language. New York, Holt, Rinehart, and Winston.

Carlson, P. and M. Anisfeld. 1969. Some observations on the linguistic competence of a two-year-old child. Child Development. 40. 569-576.

Clark, R. 1974. Performing without competence. Journal of Child Language 1. 1-10.

Ervin-Tripp, S. 1964. An analysis of the interaction of language, topic and listener. In: The ethnography of communication. Edited by J. Gumperz and D. Hymes. American Anthropologist 66.6 (11) 86-102.

Fischer, J. 1958. Social influence in the choice of a linguistic variant. Word 14: 47-56. (Reprinted in Language in Culture and Society.) Edited by D. Hymes, New York, Harper and Row.

Gingrás, R. 1974. Problems in the description of Spanish-English intra-sentential code-switching. In: Southwest areal linguistics. Edited by G. Bills. San Diego, Institute for Cultural Pluralism.

Goodenough, 1969. Rethinking "Status" and "Role" toward a general model of the cultural organization of social relationships. In: Cognitive Anthropology. Edited by S. Tyler. New York, Holt, Rinehart, and

winston, Inc.

Gumperz, J. 1964. Linguistic and social interaction in two communities.
In: The ethnography of communication. Edited by J. Gumperz and
D. Hymes. American Anthropologist 66.6 (11). 137-154.

_____ and E. Hernández-Chavez. 1972. Bilingualism, bidialectalism and
and classroom interaction. In: Functions of language in the classroom.
Edited by C. Cazden, V. John and D. Hymes. New York, Teachers College
Press.

Haugen, E. 1956. Bilingualism in the Americas: A bibliography and re-
search guide. American Dialect Society 26.

Hymes, D. 1972. Models of the interaction of language and social life.
In: Directions in Sociolinguistics. Edited by J. Gumperz and D. Hymes.
New York, Holt, Rinehart, and Winston.

Kachru, B. 1975. Toward structuring the form and function of code-
mixing: an Indian perspective. Studies in the Linguistic Sciences
5.1. Department of Linguistics, University of Illinois at Urbana.

Kernan, K. 1974. The acquisition of formal and colloquial styles of
speech by Samoan children. Anthropological Linguistics 16 (4).

Lance, D. 1975. Spanish-English code-switching. In: El lenguaje de los
Chicanos. Edited by E. Hernández-Chavez, A. Cohen and A. Beltramo.
Arlington, Virginia, Center for Applied Linguistics.

McClure, E. and M. McClure. 1975. Code-Switching among Mexican-
American children. In: From meaning to sound. Edited by H. Sharifi.
Lincoln, Nebraska, University of Nebraska.

McClure, E. and J. Wentz. 1975. Functions of code-switching among
Mexican-American children. In: Papers from the parasession on
functionalism. Chicago, Chicago Linguistic Society.

McClure, E. and J. Wentz. 1976. Code-switching in children's narratives. In: 1975 Mid-America linguistics conference papers. Lawrence, Kansas, the Linguistics Department, University of Kansas.

Ornstein, J. 1976. Sociolinguistic constraints on lexical borrowing in Tarahumara: explorations in 'langue and parole' and 'existential bilingualism' - an approximation. Anthropological Linguistics 18 (2). 70-93.

Pfaff, C. 1975. Syntactic constraints on code-switching: a quantitative study of Spanish/English. Papers presented at the Linguistic Society of America annual meeting.

_____.1976. Functional and structural constraints on syntactic variation in code-switching. in: Papers from the parasession on diachronic syntax. Chicago, Chicago Linguistic Society.

Rubin, J. 1962. Bilingualism in Paraguay. Anthropological Linguistics 4 (1): 52-58.

Sridhar, S. 1978. On the functions of code-mixing in Kannada. To appear in IJSL.

Weeks, T. 1971. Speech registers in young children. Child Development 42 (4). 1117-1131.

Wentz, J. 1976. Considerations in the development of a syntactic description of code-switching. University of Illinois Ph.D. dissertation – first draft.

_____ and E. McClure. 1976a. Aspects of the syntax of the code-switched discourse of bilingual children. In 1975 Mid-America linguistics conference papers. Lawrence, Kansas, The Linguistics Department, University of Kansas.

_____ and E. McClure. 1976b. Ellipsis in bilingual discourse. In: Papers from the twelfth regional meeting of the Chicago Linguistic Society. Chicago, Chicago Linguistic Society.

CENTER FOR THE STUDY OF READING

TECHNICAL REPORTS

No. 1: Halff, H. M. Graphical Evaluation of Hierarchical Clustering Schemes, October 1975.

No. 2: Spiro, R. J. Inferential Reconstruction in Memory for Connected Discourse, October 1975.

No. 3: Goetz, E. T. Sentences in Lists and in Connected Discourse, November 1975.

No. 4: Alessi, S. M., Anderson, T. H., & Biddle, W. B. Hardware and Software Considerations in Computer Based Course Management, November 1975.

No. 5: Schallert, D. L. Improving Memory for Prose: The Relationship Between Depth of Processing and Context, November 1975.

No. 6: Anderson, R. C., Goetz, E. T., Pichert, J. W., & Halff, H. M. Two Faces of the Conceptual Peg Hypothesis, January 1976.

No. 7: Ortony, A. Names, Descriptions, and Pragmatics, February 1976.

No. 8: Mason, J. M. Questioning the Notion of Independent Processing Stages in Reading, February 1976.

No. 9: Siegel, M. A. Teacher Behaviors and Curriculum Packages: Implications for Research and Teacher Education, April 1976.

No. 10: Anderson, R. C., Pichert, J. W., Goetz, E. T., Schallert, D. L., Stevens, K. V., & Trollip, S. R. Instantiation of General Terms, March 1976.

No. 11: Armbruster, B. B. Learning Principles from Prose: A Cognitive Approach Based on Schema Theory, July 1976.

No. 12: Anderson, R. C., Reynolds, R. E., Schallert, D. L., & Goetz, E. T. Frameworks for Comprehending Discourse, July 1976.

No. 13: Rubin, A. D., Bruce, B. C., & Brown, J. S. A Process-Oriented Language for Describing Aspects of Reading Comprehension, November 1976.

No. 14: Pichert, J. W., & Anderson, R. C. Taking Different Perspectives on a Story, November 1976.

No. 15: Schwartz, R. M. Strategic Processes in Beginning Reading, November 1976.

No. 16: Jenkins, J. R., & Pany, D. Curriculum Biases in Reading Achievement Tests, November 1976.

No. 17: Asher, S. R., Hymel, S., & Wigfield, A. Children's Comprehension of High- and Low-Interest Material and a Comparison of Two Cloze Scoring Methods, November 1976.

No. 18: Brown, A. L., Smiley, S. S., Day, J. D., Townsend, M. A. R., & Lawton, S. C. Intrusion of a Thematic Idea in Children's Comprehension and Retention of Stories, December 1976.

No. 19: Kleiman, G. M. The Prelinguistic Cognitive Basis of Children's Communicative Intentions, February 1977.

No. 20: Kleiman, G. M. The Effect of Previous Context on Reading Individual Words, February 1977.

No. 21: Kane, J. H., & Anderson, R. C. Depth of Processing and Interference Effects in the Learning and Remembering of Sentences, February 1977.

No. 22: Brown, A. L., & Campione, J. C. Memory Strategies in Learning: Training Children to Study Strategically, March 1977.

No. 23: Smiley, S. S., Oakley, D. D., Worthen, D., Campione, J. C., & Brown, A. L. Recall of Thematically Relevant Material by Adolescent Good and Poor Readers as a Function of Written Versus Oral Presentation, March 1977.

No. 24: Anderson, R. C., Spiro, R. J., & Anderson, M. Schemata as Scaffolding for the Representation of Information in Connected Discourse, March 1977.

No. 25: Pany, D., & Jenkins, J. R. Learning Word Meanings: A Comparison of Instructional Procedures and Effects on Measures of Reading Comprehension with Learning Disabled Students, March 1977.

No. 26: Armbruster, B. B., Stevens, R. J., & Rosenshine, B. Analyzing Content Coverage and Emphasis: A Study of Three Curricula and Two Tests, March 1977.

No. 27: Ortony, A., Reynolds, R. E., & Arter, J. A. Metaphor: Theoretical and Empirical Research, March 1977.

No. 28: Ortony, A. Remembering and Understanding Jaberwocky and Small-Talk, March 1977.

No. 29: Schallert, D. L., Kleiman, G. M., and Rubin, A. D. Analysis of Differences Between Oral and Written Language, April 1977.

No. 30: Goetz, E. T., & Osborn, J. Procedures for Sampling Texts and Tasks in Kindergarten through Eighth Grade, April 1977.

No. 31: Nash-Webber, B. Anaphora: A Cross-Disciplinary Survey, April 1977.

No. 32: Adams, M. J., & Collins, A. A Schema-Theoretic View of Reading Comprehension, April 1977.

No. 33: Huggins, A. W. F. Syntactic Aspects of Reading Comprehension, April 1977.

No. 34: Bruce, B. C. Plans and Social Actions, April 1977.

No. 35: Rubin, A. D. Comprehension Processes in Oral and Written Language, April 1977.

No. 36: Nash-Webber, B., & Reiter, R. Anaphora and Logical Form: On Formal Meaning Representations for Natural Language, April 1977.

No. 37: Adams, M. J. Failures to Comprehend and Levels of Processing in Reading, April 1977.

No. 38: Woods, W. A. Multiple Theory Formation in High-Level Perception, April 1977.

No. 39: Nickerson, R. S., & Adams, M. J. Uses of Context in Speech Understanding and Reading, April 1977.

No. 40: Brown, J. S., & Collins, A. Model-Based Versus Text-Based Reasoning, April 1977.

No. 41: Anderson, R. C., & Pichert, J. W. Recall of Previously Unrecallable Information Following a Shift in Perspective, April 1977.

No. 42: Mason, J., Osborn, J., & Rosenshine, B. A Consideration of Skill Hierarchy Approaches to the Teaching of Reading, April 1977.

No. 43: Collins, A., Brown, A. L., Morgan, J. L., & Brewer, W. F. The Analysis of Reading Tasks and Texts, April 1977.

No. 44: McClure, E. Aspects of Code-Switching in the Discourse of Bilingual Mexican-American Children, April 1977.

No. 45: Schwartz, R. M. Relation of Context Utilization and Orthographic Automaticity in Word Identification, May 1977.

No. 46: Anderson, R. C., Stevens, K. C., Shifrin, Z., & Osborn, J. Instantiation of Word Meanings in Children, May 1977.

No. 47: Brown, A. L. Knowing When, Where, and How to Remember: A Problem of Metacognition, June 1977.

No. 48: Brown, A. L., & DeLoache, J. S. Skills, Plans, and Self-Regulation, July 1977.

No. 49: Goetz, E. T. Inferences in the Comprehension of and Memory for Text, July 1977.

No. 50:  Anderson, R. C.  Schema-Directed Processes in Language Comprehension, July 1977.

No. 51:  Brown, A. L.  Theories of Memory and the Problems of Development: Activity, Growth, and Knowledge, July 1977.

No. 52:  Morgan, J. L.  Two Types of Convention in Indirect Speech Acts, July 1977.

No. 53:  Brown, A. L., Smiley, S. S., & Lawton, S. C.  The Effects of Experience on the Selection of Suitable Retrieval Cues for Studying from Prose Passages, July 1977.

No. 54:  Fleisher, L. S., & Jenkins, J. R.  Effects of Contextualized and Decontextualized Practice Conditions on Word Recognition, July 1977.

No. 55:  Jenkins, J. R., & Larson, K.  Evaluating Error Correction Procedures for Oral Reading, August 1977.

No. 56:  Anderson, T. H., Standiford, S. N., & Alessi, S. M.  Computer Assisted Problem Solving in an Introductory Statistics Course, August 1977.

No. 57:  Barnitz, J.  Interrelationship of Orthography and Phonological Structure in Learning to Read, August 1977.