DOCUMENT RESUME

ED 243 331   FL 014 358

AUTHOR   Milk, Robert D.
TITLE   A Comparison of the Functional Distribution of
                Language in Bilingual Classrooms Following Language
                Separation vs. Concurrent Instructional
                Approaches.
PUB DATE   84
NOTE   36p.; Paper presented at the Annual Meeting of the
                American Educational Research Association (68th, New
                Orleans, LA, April 25, 1984).
PUB TYPE   Reports - Research/Technical (143) --
                Speeches/Conference Papers (150)

EDRS PRICE   MF01/PC02 Plus Postage.
DESCRIPTORS   *Bilingual Education Programs; *English (Second
                Language); *Language of Instruction; *Language Usage;
                Primary Education; *Second Language Instruction;
                Sociolinguistics; Spanish; Teaching Methods
IDENTIFIERS   Texas (San Antonio)

ABSTRACT
                This study analyzes how two bilingual classroom
language distribution approaches affect classroom language use
patterns. The two strategies, separate instruction in the two
languages vs. the new concurrent language usage approach (NCA)
allowing use of both languages with strict guidelines for language
alternation, are observed on videotapes of a Title VII demonstration
project in San Antonio, Texas. The tapes were of students in primary
grades and were made during one school year. Analysis of the
classroom talk focuses on teachers' functional language use, measured
by utterances coded according to function. The results provide some
evidence that major concerns about the adverse effects of concurrent
language use in bilingual classrooms are unfounded. No distortions in
functional distribution patterns were found in the NCA classrooms,
and the distributions of functional language were very similar for
the two approaches. Fears of excessive switching and encouragement of
intrasentential code-switching were not substantiated. NCA teachers
did tend to favor English, but the overall ratio of Spanish to
English use was not excessively unbalanced. Evidence was found that
the fundamental assumption of the NCA, that students tend to follow
the teacher's lead in language choice, is borne out. (MSE)

A Comparison of the Functional Distribution of

Language in Bilingual Classrooms

Following Language Separation vs. Concurrent Instructional Approaches

Robert D. Milk

© 1984

Paper presented at Session on "Language of Instruction and Learning in
Bilingual Students" at American Educational Research Association
Annual Meeting, New Orleans, April 25, 1984.

2

The philosophical rationale underlying bilingual education in the United States has remained strong and appealing to those most directly affected by the movement, despite the emergence of adverse political trends. Recent opinion surveys conducted at national and regional levels demonstrate favorable community attitudes towards bilingual education, ranging from 70% among Hispanics in a nation-wide sample (NCBE, 1983) to 93% among Mexican Americans in San Antonio (Brischetto, 1983). This persistence of support is remarkable, in light of the sensationalized and politically motivated attacks that have appeared periodically in the media.

A contributing factor in helping counteract adverse political trends has been important advances made over the past decade in the research and knowledge base supporting bilingual education. These advances have been made along several fronts, and include a deepening understanding of fundamental theoretical principles, as well as a more coherent formalization of public policy through increasingly refined policy analysis. Complementing these advances in theory and public policy have been continuing investigations into what one writer labels the "technology" of bilingual education (Padilla, 1983)-- i.e., those aspects related to implementation that help translate theory into practice. Particularly noteworthy here have been studies examining the significant features of effective bilingual education (Tikunoff, 1982). Despite substantial research advances, however, there remain critical aspects of bilingual methodology dealing with core classroom-level issues that seem to have been largely by-passed by empirical investigations up to this point. One such core issue relates to the desirability of separating languages during content instruction in bilingual classrooms.[1]

3.

Separation of Languages in Bilingual Classrooms

[...]ional wisdom within the disciplines of foreign language and second language [edu]cation in the United States has dictated that languages should be maintained [s]trictly separate. According to one of the earliest proponents of bilingual education in its modern-day version, "This is particularly crucial in bilingual (dual-medium) education if the objective is to maintain both languages rather than simply to transfer the child away from its mother tongue to another language" (Gaarder, 1978, p. 58). The unequivocal manner in which this conviction has been manifested in both of these fields attests to the extent that it has been accepted "a priori" as a guiding principle, even in the absence of empirical research investigating the question.

The issue itself, nevertheless, is of critical importance to the classroom teacher, for no decision demands more immediate and continuing attention to the dual-medium teacher than when, where, and how often to use each of the two languages of the classroom during the school day. Indeed, it might be reasonably argued that no other question related to bilingual methodology is of more central importance than that of strategies for language distribution during content area instruction.[2] From a theoretical standpoint, three logical alternatives exist:

1. maintain a strict separation of the two languages
2. allow for both languages to be used during any given content area lesson, but with strict guidelines for language alternation
3. unrestricted use of the two languages during content area instruction

A review of the literature reveals that only the first two of the above alternatives have proponents among those who have given serious consideration to issues of language distribution in bilingual classrooms. The third alternative, which would allow within it the possibility of continual translation,

as well as constant unrestricted movement back and forth between the two
languages, finds no supporters in the research literature (although translation
has been used in some areas of the country under the label of Concurrent
Translation Approach[3]).

Particularly noxious to advocates of the first two alternatives
offered above (and an interesting point of convergence for what, in most
other respects, are two radically different points of view) is the phenom-
enon of widespread "translation" (or, more precisely, "interpreting") that
may commonly take place under an unrestricted dual language instructional
approach. The consensus here seems to be based on a belief that "when the
teacher alternates constantly, sentence by sentence between the two languages,
expressing each thought first in the one then in the other--the child has no
compelling reason to acquire the new tongue. He can wait at most a few
seconds and comprehend in his own first tongue" (Gaarder, 1978, p. 60).

At this point, however, the consensus ends between those advocating an
instructional approach for content development that emphasizes strict
separation of languages, and those that would allow for substantial language
alternation, albeit within strict guidelines, during content area instruction.
Swain (1983, pp. 41-43) presents an extremely lucid case in support of the
separation approach, based on four fundamental arguments:

1. Children "learn to ignore the language they do not understand,"
   because since the message is given in both languages, "then there
   is no motivation to try to figure out what is being said in
   English."

2. With the language separation approach (LSA) there will be greater
   contextualization of the kind that enhances language learning
   since "students are trying to make sense of what the teacher's
   message is; and teachers are trying to present a message that
   makes sense."

3. "Simultaneous interpretation, to which the task of a teacher using a concurrent approach to bilingual teaching can be likened" is a difficult task and makes exhausting demands on the teacher.

4. The separation approach "counteracts the natural 'pull' exerted by the dominant position of the majority language. It helps to overcome the natural tendency of minority language speakers to shift to the majority language."

In examining Swain's four arguments, it seems that the first three are aimed explicitly at a rejection of translation as a viable strategy for dual language instruction. The first argument speaks to the common observation in bilingual programs (Coballes-Vega and Walters, 1979; Dulay and Burt, 1978) that when translation is widely employed during content area instruction, children will wait for the rendering in their primary language and "tune out" when the weaker language is being used. The third argument makes the valid point that cognitive demands made during extensive use of translation are excessive and unreasonable for an already over-burdened bilingual teacher. The second argument is an extremely critical one for those who see bilingual classrooms as potentially rich environments for second language acquisition. It too, however, seems to be directed at a rejection of translation -- with a translation approach, the teacher is essentially directing herself (albeit unconsciously) at two separate groups of children (i.e., those who understand more English at one point and those who understand more Spanish at another point), and, hence, is likely to be providing input, at any given moment, that is appropriate for one group yet inappropriate for the other group. Using Krashen's terms (1982), the teacher is not likely to provide "comprehensible input" for students who are acquiring English as their second language when addressing students whose primary language is English. Likewise, when addressing those children whose primary language is Spanish, she will not likely be adjusting her speech and framing her message in a manner that

favors Spanish language acquisition by students, for whom that is their weaker language. This seems like a reasonable argument, provided that we are talking about a translation strategy. If, however, we were to conceptualize a strategy for dual language use within content area lessons wherein both languages were used in alternating fashion to develop step by step, the essential points of the lesson, without recourse to translation, then this argument will not necessarily hold. Under such a non-translation dual language strategy, an important element would involve the addressing of all members of the group (including all ranges of relative language proficiency) throughout all points of the lesson. Since the point being developed at any given moment is an important one for the ongoing development of the lesson, and since the point will not be repeated in the other language, both teacher and students will be working hard together to ensure that the message is properly con- textualized and, thus, made fully comprehensible. Under these circumstances it seems reasonable to expect that meaningful second language acquisition for both groups of children is likely to take place. This, however, is ultimately an empirical question, and one that is certainly worthy of further investiga- tion.

In sum, the first three arguments presented by Swain in support of the language separation approach appear to be valid in terms of their logic and, to some extent, in terms of their empirical support, provided that we assume the alternative strategy involves translation. None of the three points would necessarily serve as a basis for rejecting a dual language strategy that involved concurrent use of the two languages without translation. The fourth point presented by Swain, however, is relevant as a potential argument

against any concurrent approach, regardless of whether translation is used. The issue of whether concurrent use of the two languages will inevitably lead to a favoring of the majority language at the expense of the minority language is an important one, indeed. The evidence cited by Swain (Legarreta, 1979) is somewhat weak due to the limited number of classrooms involved, but there are additional studies that confirm the tendency of majority languages to be favored when used concurrently with minority language (Milk, 1981; Shultz, 1975; Ramirez, 1980). Whether or not this imbalance is likely to occur when translation is forbidden and when accompanied by training to counteract this tendency is a question that will be examined in greater depth by some of the data presented in this study.

A Non-Translation Approach to Concurrent Instruction

As stated earlier, the overwhelming thrust of commentary made regarding bilingual methodology has favored the separation of language during content area instruction, although in practice various modes of concurrent use within a given lesson have been widely implemented. In my search of the literature on bilingual methodology, however, I have found only one instance of a concurrent approach that has attempted to provide empirical validation of its viability. The approach, labelled New Concurrent Approach, has been implemented on a small scale as a Title VII Demonstration Project, and has provided staff training in the method, followed by data collection and longitudinal comparison of results obtained over a three-year period (Jacobson 1982a, 1982b, 1983). The rationale constructed by Jacobson for implementation of non-translation concurrent approach is based on a series of principles which suggest potential counter-arguments to the points raised by Swain and others in advocating strict separation of language during bilingual content area instruction.

8

A summary of the most salient arguments on behalf of a non-translation concurrent approach to bilingual instruction might include the following points:

1. The fundamental <u>pedagogical</u> justification lies on the five ways in which this approach can increase "time on task" and thus maximize "academic learning time"[4] in a bilingual classroom:

   a. A faster response is obtained during content instruction, enabling the lesson to flow more smoothly.

   b. There is no need to duplicate the teaching of curricular content (as is always the case with a translation approach, and sometimes the case with LSA).

   c. Classroom management problems are lessened (and less time lost) as the need for team-teaching or for grouping by language preference is eliminated.

   d. Since the instructor is directing the lesson to the entire group of students (and not flip-flopping back and forth), all students are maximally involved in the lesson at all times.

   e. All students have equal access to the teacher. With some "teacher/aide" instructional models using a separation approach, bilingual students tend to work more frequently with the aides, and engage in less teacher-initiated inter-action. This, in turn, diminishes the amount of "academic learning time" for bilingual students (Ortiz, 1980, p. 15).

2. Allowing bilingual children to draw on the full range of their linguistic resources, which includes elements from both languages, combined with a use of communication strategies that are familiar to the children, enables them to focus on learning the concepts being presented during content area instruction without the issue of language choice artificially imposing a distraction from this process.

3. Using both languages during <u>all</u> content instruction promotes the equal status of each of the two langauges and, thus, is more likely

to encourage a balanced distribution of the two languages (Jacobson, 1983, p. 146). (With LSA, the home language is often relegated to "less academic" subjects and is not used for the more "technical" subject areas such as math and science).

4. Both languages are developed concurrently, since relevant vocabulary and concepts will appear over the course of any given lesson in each of the two languages. Moreover, because the teacher is addressing a heterogeneous group with differing relative language proficiencies, both input and interaction strategies are modified to accommodate those who are less than fully proficient in the language being used at any given moment. These modifications enhance second language acquisition for those students who are relatively less proficient in one of their two languages.

5. Language alternation strategies are commonly used in bilingual communities. Incorporating those aspects of language alternation that are pedagogically justifiable[5] into bilingual methodology "could accomplish one of the most cherished but also least attained goals, not only in bilingual education, but in all education settings: that of bringing closer together the school and the community" (Jacobson, 1983, p. 148).

The rationale for a New Concurrent Approach, therefore, in summary form, is based on the following five arguments: (1) it increases the amount of academic learning time (ALT), which in turn leads to greater achievement; (2) the focus during subject area instruction becomes (for students) the content and the development of concepts, not language; (3) by providing equal status for the two languages, the approach promotes "a psychological climate conducive to the use of the home language in spite of external

pressures" (Jacobson, 1983, p. 8); (4) it encourages second language acqui-
sition; and (5) because it draws on language behavior patterns present in
the community, it promotes a closer relationship between school and
community.

Ultimately, the validity of these five arguments can only be determined
through empirical means. There is some evidence to suggest that the fifth
argument is at least based on correct assumptions about the sociolinguis-
tic context in which many Spanish-English programs function (Hernandez-Chavez,
1978; Aguirre, 1980; Aguirre and Bixler-Marques, 1980). The first argument,
related to achievement, will be addressed by evaluation reports soon to be
completed by a demonstration project implementing the New Concurrent Approach
in San Antonio. The fourth argument, related to second language acquisition
in NCA classrooms, will be the subject of a future study examining student-
teacher interaction in these classrooms. The second argument, related
to the nature of learning in bilingual classrooms, may become subject
to some degree of verification or rejection based on ongoing research on
bilingual instruction (e.g., Tikunoff, 1982). The third argument, which
deals with language distribution patterns, is examined in this study
via an analysis of videotape samples obtained from a 1981-84 Demonstration
Project implementing LSA and NCA instructional models in four different
classrooms.

Research Questions

It is interesting to note that both Swain and Jacobson, in arguing for contrasting language distribution strategies, base their arguments on a similar assumption that <u>development of the native language</u> is a necessary prerequisite for successful outcomes in bilingual education. Hence, it is not surprising that each of them, while arguing for quite different instructional strategies, should include as a key element in their position a concern that a fairly balanced distribution of the two languages be preserved in the classroom as a means of fostering growth in both of the languages of instruction.

The research questions examined in this study focus on various facets of the language distribution patterns for Spanish and English during content area instruction in four classrooms implementing contrasting approaches to bilingual methodology: the Language Separation Approach (LSA) and the New Concurrent Approach (NCA). Two sets of questions are investigated, the first set involving a contrast between the two approaches, and the second set examining specific areas of concern within the more controversial and less widely applied of the two approaches -- i.e., the New Concurrent Approach:

A. Language Distribution Patterns for LSA vs. NCA.

    1. To what extent are the functional distribution patterns for the two languages (Spanish and English) similar in classrooms implementing these two alternate approaches?

    2. Within each approach, are there differences between individual teachers in their language distribution patterns?

B. Distributional patterns of Spanish and English within the NCA.

    3. Are teachers implementing the NCA able to maintain fairly balanced use of the two languages of instruction?

    4. Is there a tendency to encourage intrasentential code-switching when languages are not strictly separated during instruction?

5. Do students learn to follow the lead of the teacher in using the two languages of the classroom?

6. When languages are used concurrently during instruction, is there a tendency for participants to switch back and forth between the two languages over relatively short stretches of discourse?

Method

Data Source. During 1981 - 84, a Title VII Demonstration Project directed by Jacobson (1982) from the Division of Bicultural-Bilingual Studies at The University of Texas at San Antonio was implemented in collaboration with the Southwest Independent School District in San Antonio. The project, involving four teachers in two schools, followed the academic achievement of participating students as they progressed either from K-2 (2 classrooms) or from grades 1-3. In one school, the LSA was implemented in two classrooms, whereas in the other school, NCA was implemented. Each of the four participating teachers was videotaped every two weeks while conducting a lesson to students.[6]

The data source for this research study consists of the videotape samples obtained during content area instruction over the course of one year (1982-83) of the project.[7] There are a total of 33 lessons represented in this sample (see Table 1), with each lesson running typically between 20-25 minutes.

(Insert Table 1)

Subjects. All four teachers are Mexican American and are proficient in Spanish and English. Teachers C and D (NCA) are female and in their late 20's, with 4 and 6 years of teaching experience, respectively. Teacher A (female) and B (male) are in their early 30's, and possess 8 years of teaching experience.

The district in which the schools are located is in a semi-rural area

in the southwestern outskirts of San Antonio. In the two schools in which

the Demonstration Project is located, Mexican American students form ap-

proximately 66% of the total school population. The majority of these students

are from lower to lower-middle SES, and a majority of them arrive at school

having had either primary exposure to Spanish or else extensive exposure

to both languages in the home.

Procedure. The 33 videotaped lessons included in the sample were viewed

by the investigator, and extensive notes obtained in order to provide con-

textualization information for the subsequent analysis. The lessons were

transcribed,[8] then subjected to various analyses in order to address the

six research questions..

Data Analysis. The unit of measurement for functional analysis of the teachers'

language distribution patterns is the utterance. "Utterance" is here defined,

following Cherry (1978), as "a meaningul unit of speech, usually bounded by

a pause of one second or more." Teacher utterances were coded by function,

using a category system adapted from Wood (1978), and previously used by

Milk (1980).

(Insert Table 2)

Table 2 describes and provides examples of the functions included in

the category system. A reliability study examining criterion-related coder

agreement with this system was carried out in connection with a previous

study (Milk, 1980, p. 142) and the following Kappa coefficients obtained:

Inform, K = .81; Control, K = .94; Feeling, K = .90; Ritual, K = 1.00;

Imagine, K = 1.00. The overall Kappa coefficient obtained for all coded

categories was K = .90. No further reliability studies have been conducted

in conjunction with the study reported here; however, because the nature
of the data is quite similar (i.e., first/second grade bilingual classroom
data), there is little reason to believe that reliability of the codings
should be significantly different from what was previously established.
In order to minimize potential error introduced in the coding process, all
coding of functions in this study was performed solely by the investigator.

Results

Research Question #1. To what extent are the functional distribution patterns
for the two languages (Spanish and English) similar in classrooms imple-
menting these two alternate approaches?

This question aggregates the data for the two teachers following each
approach (Table 3), allowing a global comparison of the functional distri-
bution for the two languages across the two approaches. Within the LSA,

(Insert Table 3)

the most salient differences in the distribution patterns for Spanish and
English are for Control, where English is used more than twice as frequently,
relatively speaking (22.5% vs. 10.9%), and for Inform, where Spanish is used
relatively more often (43.2% vs. 33.1%).[9] For the other functions, the dis-
tribution is remarkably similar for the two languages. Within the NCA, the
distribution patterns for the two languages are similar, although there is
a slight tendency to use English more for Control, relatively speaking
(17.2% vs. 13.2%).

(Insert Figure 1)

The overall similarity of the patterns of language use for LSA and
NCA can be appreciated in Figure 1, which provides a visual comparison of
the functional distribution for the two approaches.

Research Question #2: Within each approach, are there differences between
individual teachers in their language distribution patterns?

(Insert Table 4)

Within the LSA, both teachers used English relatively more often for

control than Spanish, although the discrepancy is particulary marked for

Teacher B. Within the NCA a similar difference is evident for Teacher D,

but not for C. Teacher C is unique in being the only one of the four teachers

with relatively greater use of Inform statements than Questions. (Her

ratio of Inform:Questions is 1.23 for Spanish and 1.59 for English,

whereas it is less than 1.0 for all other teachers). This may be indicative

of a teaching style that is more lecture-oriented than inquiry-oriented.

Beyond this, minor differences exist in some other categories, but none are

particularly striking.

Research Question #3: Are teachers implementing the NCA able to maintain
fairly balanced use of the two languages of instruction?

. (Insert Table 5)

Calculation of the relative use of Spanish and English by the two NCA

teachers (Table 5) reveals overall greater use of English, although the com-

posite distribution of 42.5% Spanish to 57.5% English represents fairly solid

Spanish use given the heavily English-oriented goals of the district's tran-

sitional bilingual education program. It is not possible to make a direct

comparison on this question with the two LSA classrooms, since the videotape

samples obtained there involve either all-English or all-Spanish lessons.

Nevertheless, since under the LSA the allocation of languages to specific

content areas (English for Math, Science, Health and P.E. and Spanish for

Social Studies, Art and Music) results in an approximately 1/3 Spanish to 2/3 English distribution by the end of second grade, it is quite possible that the NCA, with a 42:58 Spanish/English ratio may actually yield greater Spanish use in the classroom than what is obtained by a separation approach as typically implemented under current practices.

It is worth noting that the two NCA teachers varied substantially from each other in their overall Spanish/English distribution pattern (39:61) vs. 44:56). This is not surprising, since individual differences with respect to relative language proficiency, language attitudes, and classroom context would appear likely to influence heavily the overall distribution pattern for the two languages.

Research Question #4:   Is there a tendency to encourage intrasentential code-switching when languages are not strictly separated during instruction?

Out of the 3450 teacher utterances coded in the NCA sample, only four instances of intrasentential code-switching were recorded.[10]

Research Question #5:   Do students learn to follow the lead of the teacher in using the two languages of the classroom?

A cardinal "discourse rule" of an NCA classroom is that pupils must follow the lead of the teacher in terms of language choice -- i.e., they should respond in the same language that the teacher last used. Indeed, the whole approach is based on the assumption that this "rule" can be unconsciously acquired by students through indirect means, and that it will be consistently applied once it is acquired. Table 6 compares the two lessons (one for each teacher) from the earliest point in the school year (September), with the two lessons that were last recorded during the school year (March) in terms of the extent to which this discourse rule is followed by the pupils.

(Insert Table 6)

The results indicate that the "language choice" rule (i.e., students must answer or respond in the same language being used by the teacher at that particular moment) is rarely violated -- the rule was violated only six times in the 554 teacher/student exchanges examined. No difference was found between early in the school year and later in the year, but the fact that most of the children had already spent one year in an NCA classroom undoubtedly explains the extent to which the rule was already being followed early in the school year.

Research Question #6: When languages are used concurrently during instruction, is there a tendency for participants to switch back and forth between the two languages over relatively short stretches of discourse?

The intent of this question is to address the "flip-flop" issue -- i.e., the concern that a concurrent approach encourages frequent going back and forth between the two languages. The question is an important one because, if the input provided by NCA teachers is to be of the kind that would stimulate acquisition by those pupils for whom it is their weaker language (an issue not addressed by this study), then it must not only not involve translation, but it must also occur in sufficient "chunks of discourse" for a complete idea or a full message to be completed. The difficulty in addressing the question, however, is that there is no empirical nor theoretical basis on which to establish what a reasonable "chunk of discourse" that would accomplish this goal might be. Ultimately, without further research into this issue, the decision of what the ideal limits for "number of utterances between switches" should be is an arbitrary one, but it seems reasonable to at least assume that either extremely short "chunks" (e.g., 3 - 4 utterances) or extremely long stretches (e.g., 50 teacher utterances, which would typically involve 8 - 10 minutes of class interaction without a

switch) would violate the fundamental rationale for NCA. The intent of this question, therefore, is strictly descriptive -- viz., do the teachers manifest more or less moderate switching behavior when implementing the NCA in a real classroom context?

(Insert Table 7)

Table 7 reveals a high degree of variability in switching behavior for the two teachers. The range for "mean number of utterances per discourse unit" for each teacher is broad (ranging from 7.2 to 31.3 for A and from 12.9 to 63.8 for B), and in each case the pooled standard deviation for all the lessons was very close to the overall mean. This variability is not particularly surprising, given the wide variation in the nature and content of the lessons included in the sample (e.g., social studies lessons focusing on history vs. math lessons involving work with manipulatives). Despite the overall variability, however, there is some clustering in the middle around the mean: for Teacher A, five out of the eight lessons were $\pm$ 6 from the mean, and for Teacher B five out of ten lessons were $\pm$ 5 for the mean. From this we can get a sense of a "typical" lesson for Teacher A involving from 7 - 15 utterances in each language before switching, and for Teacher B from 16 - 25 utternaces.

As we observed in Question #3, the differences between the two teachers are striking, with the central ("typical") range not even overlapping. It is interesting to note that the teacher who switched more frequently (A) is also the teacher who ended up attaining the least balanced distribution pattern (39% Spanish to 61% English). Whether or not this relationship is a meaningful one cannot, obviously, be determined, but this observation does raise an important question for NCA implementation -- viz., whether, in order to obtain greater balance in the distribution of Spanish and English, it

might not be desirable to have less switching (i.e., a great mean number of utterances per "discourse unit") than the 7 to 11 range manifested by Teacher A in four out of eight of her lessons.

Discussion

The data presented here, although not addressing the critical issues of achievement outcomes nor of second language acquisition, do provide some basis for arguing that major concerns related to potential adverse effects on language use sometimes associated with implementation of a concurrent approach may be unfounded. No distortions in terms of functional distribution patterns were observed in the NCA classrooms and the distribution of language functions obtained in classrooms using a separation approach and those using a concurrent approach were remarkably similar. Other fears associated with concurrent use of the two languages -- e.g., execessive switching and the encouragement of intrasentential code-switching -- were not substantiated by the data. Although the NCA teachers did manifest some tendency to favor English, the overall ratio of Spanish to English use (42:58) was not excessively unbalanced. Finally, convincing evidence is presented that a fundamental assumption under which the New Concurrent Approach is based -- viz., that students learn to "follow the lead" of the teacher in terms of language choice -- is in fact being met in these class-rooms. This is an important finding, because the potential effectiveness of NCA is based on the notion that teachers can be trained to make deliberate decisions regarding language choice (thus avoiding random switches) and that students can readily acquire a classroom discourse rule that unconsciously directs them to "follow the lead" of the teacher in terms of language choice.

There are important limitations in this study, the most salient of which is the small number of teachers involved in the sample. The system used to

code language functions (Questions 1 and 2) suffers from the same deficiencies as all such systems -- viz., the number of categories and the operational definition of those categories are essentially arbitrary. Moreover, because of the multifunctional nature of many utterances, the coding of teacher utterances into single, discrete categories inevitably raises some difficulties in the coding process. Finally, because the analysis is based on videotaped samples, there is always the possibility that the language behavior obtained on these recordings is not fully representative of the classroom language behavior of the teachers in the absence of the video recorder. The fact that both teachers and students had been subjected to biweekly videorecording sessions for a full year prior to the point where the corpus is initiated, however, provides some protection against this potential distortion.

Several important questions for further research are raised by this study. First, it would be interesting to learn if the functional range for specific functions (for example, for control or for feeling) is more extensive for the teachers in one language than for the other. If so, a possible focus for in-service training might involve the further development of teachers' functional range in their more restricted language. A second area for further study might involve a content analysis of the NCA transcripts to determine the extent to which there is overlap in conceptual content when languages are switched. This information would help address the concern that a concurrent approach inevitably leads to a certain amount of translation. Thirdly, it would be interesting to learn if cultural content tends to be carried more in one language than the other, or if there is a connection between each language and the kind of cultural content associated with it. Finally, the most critical question of all is related to the possibilities for second language acquisition when a concurrent approach is followed: Is there evidence within NCA discourse patterns that students are exposed to the kinds of modified

interaction and input that might stimulate acquisition in their weaker language?

Summary

A major unresolved issue in bilingual methodology revolves around the desirability of maintaining a strict separation of languages during content area instruction. This study identifies numerous areas of concern that have been raised in the literature regarding a concurrent approach to content area instruction, then examines data from a demonstration project that has implemented this approach under close supervision and on-going in-service training. The results provide evidence that a non-translation concurrent approach when properly implemented and carefully monitored, yields functional distribution patterns that are similar to those yielded by a separation approach. Moreover, the concurrent approach does not lead to undesired classroom language behavior, such as excessive switching or intrasentential code-switching. The language distribution pattern obtained (42.5% Spanish use to 57.5% English use), although favoring English, is not excessively unbalanced. Finally, in the sample of teacher/student exchanges that was examined, students correctly applied the NCA "language choice rule" 98% of the time, providing convincing evidence that students do in fact readily learn to follow the teacher's lead in switching from one language to the other — a core assumption behind the effective implementation of a concurrent approach to bilingual instruction.

NOTES

[1] This article is based on a paper presented at American Educational Research Association, New Orleans, April 26, 1984.

[2] There appears to be no disagreement with respect to the desirability of maintaining strict separation of languages during language arts and reading, and (for the most part) second language instruction. For this reason, the discussion here is confined to the issue of language separation during content area instruction.

[3] Among the instructional models described in a monograph developed at the BABEL Resource Center (cf. Gonzalez, 1976) is the "concurrent model" in which "automatic (alternate) translation takes place" (p. 7). The author, however, is merely describing alternative instructional models, and not advocating the use of this particular model. Indeed, she points out that this model might be "confusing to the child" and should not be widely applied.

[4] "Academic learning time" (ALT) appears to be correlated with school achievement. (cf. Denham and Lieberman, 1980).

[5] Jacobson notes that while both intersentential and intrasentential language alternation strategies are present in the community, only the former is acceptable in school settings on educational grounds.

[6] The language distribution strategies for the project were as follows: (a) the LSA aimed for 90% Spanish (S) -10% English (E) at the beginning of Kindergarter 75% S - 25% E by end of Kindergarten, 50% S - 50% E in the first grade, 25% S -

75% E in the second grade, with 100% English projected by the end of third grade. (b) The NCA strove for 90% S - 10% E throughout kindergarten, and 50% S - 50% E during grades 1 - 3.

[7] I am grateful to Dr. Rodolfo Jacobson, Project Director, for providing access to this extremely rich database. I would also like to thank Ms. Paula Parks, Project Coordinator, for providing information and for assisting me in various phases of the study.

[8] I would like to acknowledge financial support from the Dean's Research Fund, College of Social and Behavioral Sciences, UTSA, in completing these transcriptions. I am also greatly indebted to Ms. Noemi Trejo for assisting me in the transcription phase of this research study.

[9] These figures refer to relative frequencies only. The comparisons refer only to the relative distribution of functions within the lessons taught in English and within the lessons taught in Spanish. Comparisons should not be made across languages when examining the LSA data, since lessons included in the sample are of varying lengths.

[10] Pupil utterances were not examined since that is beyond the scope of this study. Impressions based on viewing the videotapes and examination of the transcripts, however, are that very few instances of pupil intrasentential code-switching exist in this corpus of data.

REFERENCES

Aguirre, A.. "The Sociolinguistic Survey in Bilingual Education: A Case Study
of a Bilingual Community." In R. Padilla, ed., Ethnoperspectives in
Bilingual Education Research, Volume II: Theory in Bilingual Education.
Ypsilanti: Eastern Michigan University, 1980.

Aguirre, A. and D. Bixler-Marquez. "A Sociolinguistic Assessment Model for a
Bilingual Community: A Case Study." NABE Journal IV (2), 1980, pp. 1-18.

Brischetto, R. "Mexican American Issues for the 1984 Presidential Election."
Southwest Voter Public Opinion Report No. 1. San Antonio: Southwest
Voter Registration Education Project, 1983.

Cherry, L. Teacher Student Interaction and Teachers' Expectation of Students'
Communicative Competence. Final report to the Carnegie Corporation.
Arlington, VA: Center for Applied Linguistics, 1978.

Coballes-Vega, C. and J. Walters. "The Dual Language Model Reconsidered."
1979. ED 174 047.

Denham, C. and A. Lieberman, eds.. Time to Learn. Washington, D.C.:
National Institute of Education, 1980.

Dulay, H. and M. Burt. "From Research to Method in Bilingual Education."
In J. Alatis, ed., Georgetown University Round Table on Language and
Linguistics, 1978. Washington, D.C.: Georgetown University Press, 1978,
pp. 551-575.

Gaarder, B. "The Golden Rules of Second Language Acquisition by Young Children."
NABE Journal II (2), 1978, pp. 58-59.

Garcia, E., L. Maez, and G. Gonzalez. "The Incidence of Language Switching in
Spanish/English Bilingual Children of the U.S." In E. Garcia, ed., The
Mexican American Child: Language, Cognition and Social Development.
Tempe, AZ: Center for Bilingual Education, 1983, pp. 19-42.

Gonzalez, M. Bilingual Education Program and Instructional Models. Berkeley:
BABEL Resource Center, 1976.

Hernandez-Chavez, E. "Language Maintenance, Bilingual Education, and Philosophies
of Bilingualism in the U.S." In J. Alatis, ed., Georgetown University
Round Table on Language and Linguistics, 1978. Washington, D.C.: Georgetown
University Press, 1978, pp. 527-550.

Jacobson, R. "The Implementation of a Bilingual Instruction Model, The New
Concurrent Approach." In R. Padilla, ed., Ethnoperspectives in Bilingual
Education Research, Vol. III: Bilingual Education Technology. Ypsilanti,
MI: Eastern Michigan University, 1982a, pp. 14-29.

Jacobson, R. "The Role of the Vernacular in Transitional Bilingual Education."
In B. Hartford, A. Valdman and C. Foster, eds., Issues in International
Bilingual Education: The role of the vernacular. New York: Plenum Press,
1982b, pp. 181-197.

Jacobson, R. "Promoting Concept and Language Development in the Classroom."
In S. Seidner, ed., Issues of Language Assessment, Vol. II: Language
Assessment and Curriculum Planning. Springfield, IL: Illinois State
Board of Education, 1983, pp. 143-150.

Katra, W. and W. Cline. "Appropriate Models for Bilingual-Bicultural Instruction
in Michigan." n.d. ERIC ED 158 584, pp. 95-104.

Krashen, S. Principles and Practice in Second Language Acquisition. Oxford:
Pergamon, 1982.

Legarreta, D. "The Effects of Program Models on Language Acquisition by Spanish-speaking Children." TESOL Quarterly 13, 1979, pp 521-534.

Milk, R. "Variation in Language Use Patterns Across Different Group Settings in Two Bilingual Second Grade Classrooms." Unpublished Ph.D. dissertation, Stanford University, 1980.

Milk, R. "An Analysis of the Functional Allocation of Spanish and English in a Bilingual Classroom." CABE Research Journal II (2), Winter 1981, pp. 11-26.

NCBE. "Strong Pupular Support for Bilingual Education." Forum VI (4), Summer 1983, pp. 1-3.

Ortiz, F.I. "Significant Instructional Features in Bilingual Education." Paper presented at American Educational Research Association Convention. Boston, 1980. ED 187 488.

Padilla, R., ed. Theory, Technology, and Public Policy on Bilingual Education. Rosslyn, VA: National Clearinghouse for Bilingual Education, 1983.

Ramirez, A. "Language in Bilingual Classrooms." NABE Journal IV (3), Spring 1980, pp. 61-80.

Sapiens, A. "The Use of Spanish and English in a High School Bilingual Civics Class." In J. Amastae and L. Elias-Olivares, eds., Spanish in the United States: Sociolinguistic Aspects. New York: Cambridge University Press, 1982, pp. 386-412.

Shultz, J. "Language Use in Bilingual Classrooms." Presentation at TESOL Conference, Los Angeles, California, 1975.

Swain, M. "Bilingualism without Tears." In M. Clarke and J. Handscombe, eds., On Tesol '82: Pacific Perspectives on Language Learning and Teaching. Washington: Teachers of English to Speakers of Other Languages, 1983, pp. 35-48.

Tikunoff, W. "An Emerging Description of Successful Bilingual Instruction." San Francisco: Far West Laboratory, 1982.

Wood, B., ed. Development of Functional Communication Competencies, Pre-Kindergarten to Grade 6. Urbana, IL: ERIC Clearinghouse on Reading and Communication Skills, 1978.

Table 1

Number of Lessons in Sample
by Teacher and by Approach

Approach	Teacher	Total No. of Lessons in Sample
LSA	A	7
LSA	B	8
NCA	C	8
NCA	D	10

Table 2

Description of
Classroom Language Functions

Function	Description	Example
Control	Elicits a nonverbal response or attempts to influence behavior. Includes: command, request, suggestion, threat, prohibition, warning, instructions that direct students' nonverbal behavior.	"Stand up everybody." "Todos escriban su nombre."
Feeling	Expresses an attitude or state of mind related to feelings, likes/dislikes, and humor. Includes: exclamation, congratulation, approval, disapproval, commiseration.	"Fantistic!" "Todos dibujaron sus mapas muy bien."
Inform	Provides information. Includes: statement of fact, affirmation, narration, reporting, explanation.	"Each state has a capital city." "Las aves viven en nidos."
Inform - Q (Question)	Elicits a verbal response. Includes: questions that seek information or explanation	"What is he going to subtract?" "Y quien fue George Washington?"
Ritual	Serves to maintain smooth interaction or to manage the flow of discourse in the classroom. Includes: greeting, call, turn-taking, formulaic statement.	"And what do you think?" "Muchas gracias."
Imagine	Alludes to fantasy or non-real phenomena. Includes: "pretending", fantasizing.	"Let's pretend we're living on another planet." "Ella va a ser tu madre ahora."

Table 3

Distribution Patterns for Spanish and English
by Approach (LAS vs. NCA)

| | Language Separation Approach | | | | New Concurrent Approach | | | |
| | Spanish | | English | | Spanish | | English | |
	N	%	N	%	N	%	N	%
Control	86	10.9	251	22.5	199	13.2	351	17.2
Feeling	2	0.3	7	0.6	27	1.8	47	2.3
Inform	342	43.2	369	33.1	621	41.3	866	42.5
Question (Inf.)	352	44.5	473	42.5	600	39.9	737	36.2
Imagine	0	0.0	0	0.0	0	0.0	5	0.2
Ritual	9	1.1	14	1.3	56	3.7	31	1.5
Total	791	100.0	1114	100.0	1503	99.9	2037	99.9

29

Table 4

Distribution Patterns for Spanish
and English by Teacher

	Language Separation Approach								New Concurrent Approach							
	Teacher A				Teacher 8				Teacher C				Teacher D			
	Spanish		English		Spanish		English		Spanish		English		Spanish		English	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Control	42	12.7	104	18.0	44	9.5	147	27.4	42	8.9	62	8.3	157	15.2	289	22.5
Feeling	2	0.6	1	0.2	0	0.0	6	1.1	8	1.7	2	0.3	19	1.8	45	3.5
Inform	137	41.5	190	32.9	205	44.5	179	33.4	226	47.8	413	55.0	395	38.3	453	35.2
Question (Inf.)	145	43.9	274	47.4	207	44.9	199	37.1	184	38.9	260	34.6	416	40.4	477	37.1
Imagine	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	0.5	0	0.0	1	0.1
Ritual	4	1.2	9	1.6	5	1.1	5	0.9	13	2.7	10	1.3	43	4.2	21	1.6
Total	330	99.9	578	100.1	461	100.0	536	99.9	473	100.0	751	100.0	1030	99.9	1286	100.0

30

31

ERIC

Table 5

Relative Use of Spanish and English
by NCA Teachers[a]

	Teacher C	Teacher D	Composite (C and D)
Percent Spanish Utterances	38.6	44.5	42.5
Percent English Utterances	61.4	55.5	57.5

[a] Based on a total sample of 3540 utterances.

32

Table 6

Pupil Application of NCA
"Language Choice" Rule

	No. of Teacher/Student Exchanges	No. of Times "Language Choice" Rule is Followed	% Application of Rule
September	137	135	98.5
March	143	139	97.2

Table 7

Mean No. of Utterances
per Discourse Unit^a
in NCA Sample

Lesson No.	Teacher A				Teacher B		
	X	SD	N[b]		X	SD	N[b]
1	15.2	2.4	5		30.0	9.4	4
2	7.4	5.1	21		22.9	26.2	13
3	25.1	21.2	7		16.2	5.6	5
4	8.8	6.2	18		21.2	19.8	5
5	7.2	3.8	22		25.4	8.9	8
6	31.3	20.8	9		34.0	26.9	10
7	11.7	3.9	6		63.8	26.8	4
8	31.0	20.1	4		14.0	7.5	25
9	---	---	---		22.0	28.3	10
10	---	---	---		12.9	8.8	31
Overall (Pooled)	13.0	13.3	92		20.6	19.5	115

^{a}"Discourse Unit" is defined here by language choice. It refers to the number of utterances made by the teacher in one language before switching to the other language.

^{b}N refers to number of discourse units in the lesson.

34

Figure 1
Spanish/English Distribution Patterns for Language Separation Approach vs. New Concurrent Approach

Legend:
——— = Spanish
- - - - = English

LSA ○
NCA □
NCA ■
LSA ●

Y-axis: Percent Occurrence (5, 10, 15, 20, 25, 30, 35, 40, 45, 50)

X-axis: Language Function — Control, Feeling, Inform, Question (I), Imagine, Ritual