Three research-based theoretical frameworks on which educational programs for language minority students might be based are discussed, along with a composite framework. The frameworks, which coincide with California's frameworks (described in "Schooling and Language Minority Students: A Theoretical Framework," 1981), are as follows: (1) a framework for communicative competence, (2) a framework for second language (L2) acquisition, and (3) a framework for primary language (L1) development and its implications for communicative competence in L1 and L2. Theories and research by Canale and Swain (1980), Strevens (1977), Shuy (1976), Cummins (1981), Krashen (1981), and Di Pietro (1979) are interwoven to develop a composite framework. This framework has been empirically tested as a teacher training device for 18 months and is now entering an observation stage at the classroom level. Included is a review of the state of the art in bilingual education that covers demographic projections, historical deficiencies in the definition of language minority students, and the progression of research trends and perceived needs. In addition, attention is focused on communicative competence and second language acquisition theories, as well as the framework for bilingual education. Finally, a composite model for teacher trainers is presented, with attention to its strengths and weaknesses, and implications for improving and expanding the model to meet the schooling needs of language minority students. (SW)
SECOND LANGUAGE ACQUISITION AND ORGANIZATIONAL CHANGE THROUGH AN EFFECTIVE TRAINING SYSTEM

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Margarita Calderón

INTRODUCTION

The growing interest in the problems of language minority students in the United States have been accompanied by an enormous number of books, articles, and conferences filled with "how-to" workshops and materials. Advice regarding approaches, methods, strategies, and techniques for effectively educating language minority students often was offered without any concern or explanation of empirical evidence.

For the most part, bilingual educators coincided in their programmatic goals. Regardless of the approach taken, they agreed that at the end of the treatment period language minority students should exhibit: (1) high levels of English language proficiency, (2) appropriate levels of cognitive/academic development, and (3) adequate psychosocial and cultural adjustment (Schooling and Language Minority Students: A Theoretical Framework, 1981). Successful attainment of these goals, however, was limited in the past, due in part to the absence of a theoretical framework upon which programs for language minority students could be based. Without a framework, policy makers, teacher trainers, and classroom decision makers often were unable to focus consistently on the psychosocial and educational factors that influence language minority students' achievement.

*This paper was presented at the Conference on Investigation of Form and Function in Chicano English at the University of Texas at El Paso, September 10-12, 1981.
This paper will attempt to explain the importance of achieving the above three goals through three research-based theoretical frameworks that coincide with those of this state (Schooling and Language Minority Students: A Theoretical Framework, 1981): (1) a framework for communicative competence, (2) a framework for second language acquisition (L2), and (3) a framework for primary language (L1) development and its implications for communicative competence in L1 and L2. Theories and research by Canale and Swain (1980), Strevens (1977), Shuy (1976), Cummins (1981), Krashen (1981), and Di Pietro (1979) have been interwoven to develop a composite framework. This framework has been empirically tested as a teacher-training device for the past 18 months and is now entering its observation stage at the classroom level.

The first part of the paper reviews the state of the art in bilingual education by describing: (1) demographic projections, (2) historical deficiencies in the definition of language minority students, and (3) the progression of research trends and perceived needs. The second section focuses on communicative competence and second language acquisition theories. The third section describes the framework for bilingual education. Finally, I present a composite model for teacher trainers, its strengths and weaknesses, and implications for improving and expanding the model to meet the schooling needs of language minority students.

STATE OF THE ART IN BILINGUAL EDUCATION

Demographic Context of Bilingual Education

In 1978, the Children's English and Services Study (CESS) was launched by the National Institute of Education to obtain counts of limited English proficient (LEP) children in the nation and in three states: California, Texas, and New York. Subsequently, the Non-English Language Background (NELB) and Lim-
The English Proficient (LEP) Study was initiated to provide in-depth data on LEP students in terms of language, age, and state. The results of these studies provided the following current data and current trends.

LEP Results by Language

1. Spanish, Asian, and non-Spanish/non-Asian LEP populations are experiencing slight declines during the 1980s but are projected to rise strongly or return to original levels by the year 2000.

2. Between 1976 and 2000 there should be an increase of 880,000 LEP 5- to 14-year-old persons; of this number, 840,000 (95.5 percent) are accounted for by the Spanish LEP population.

3. Spanish LEPs, aged 5 to 14 years, will move from 1.8 million (71 percent of all LEPs) in 1976 to 2.6 million (77 percent of all LEPs) by 2000.

4. Asian LEPs, aged 5 to 14 years, will include approximately .13 million in both 1976 and 2000.

5. LEP to NELB ratios (LEP rates) vary considerably by language, with the highest LEP rates (75 percent) found among Spanish and Vietnamese populations and the usual range being 41 to 53 percent.

LEP Results by Age

1. There will be a slightly greater overall increase in 5- to 9-year-old LEPs than in 10- to 14-year-old LEPs between 1976 and 2000.

2. The younger age group will move from 1.3 million to 1.8 million, and the older age group will increase from 1.3 million to 1.6 million.

LEP Results by Major States

1. California and Texas will show overall gains in number of LEPs between 1976 and 2000 (California: 6 million to 9 million; Texas: 5 million to 9 million), while New York will stay the same at 5 million between 1976 and 2000.

2. LEPs are more highly concentrated than NELBs in these three states, with the percentage of the national LEP population clustered in these states increasing from 63 percent to 67 percent between 1976 and 2000, as compared to the percentage of the national NELB population in these states rising from 45 percent to 48 percent for that period.

These results have serious implications for bilingual education planning. First, Spanish LEPs will become an increasingly important factor in education in the next 20 years. Second, the geographic concentration of NELBs and LEPs will be within three states: California, Texas, and New York. Third, although
NELB groups will temporarily decrease during the 1980s, they will all increase again by the end of this century.

Although a more complete study, based on the 1980 census, will be available soon, the above data demonstrate a clear need for new projections for educational planning for meeting the needs of language minority groups in the United States.

Historical Deficiencies in the Definition of LEP Students

The concept of bilingual education was supported by Congress with the passage of the Bilingual Education Act of 1968. Much of the impetus for the development of bilingual education derived from: (1) the failure of second language literacy skills in minority language children, and (2) the "linguistic mismatch" between the language of the home and the language of the school leads to retardation in academic skills (UNESCO, 1953; United States Commission on Civil Rights, 1975). The focus of the UNESCO statement, "it is axiomatic that the best medium for teaching a child is his mother tongue," (p. 11) gave rise to bilingual education. Unfortunately, the language that created the program and its subsequent amendments also placed the program at a disadvantage. For example, the 1968 enactment provides services to "...children who are educationally disadvantaged because of their inability to speak English..." (Senate report 90-726, p. 49). The term disadvantaged gave rise to a deficit theory of bilingual education. It became a remedial and compensatory program rather than an enrichment program.

In 1974 the amendments still concentrated on the definition, "children of limited English-speaking ability." But by 1978, the law expanded the Act's coverage to include speaking, understanding, reading, and writing into a new term: "children of limited English proficiency."
The Record to Date

How, then, has bilingual education served Hispanic children under the impact of federal legislative, judicial, and administrative action? Pifer (1979) finds that:

...bilingual programs were launched hastily, with little empirical evidence of "what works," without adequate diagnosis of children's varying linguistic needs, without properly trained teachers or appropriate curricular materials, and often without the strong support of school administrators.

However, he feels that much of the fault can be laid on the laxity in federal planning and supervision.

As Troike (1978) points out, before 1978 less than .25 percent of Title VII funds were spent for basic operational research. The first Bilingual Education Act included no funds for research; the emphasis was on immediate action. By 1979, however, Troike's plea had been heard and $2 million were allocated for research; by 1980, $4.6 million were appropriated; and by 1981, appropriations totaled $6 million. Thus, in the last three years, research on bilingual program design and implementation was finally initiated. Nevertheless, the National Advisory Council for Bilingual Education (NACBE) identified two areas of inquiry that are still needed for determining the effectiveness of program implementation. These are:

1. Studies to identify the type, level, and quality of implementation of programs presently offered to LEP children where the focus should be on the components of instruction rather than typologies such as maintenance or transitional programs. These components should include program entry and exit criteria, assessment approaches, language of instruction, duration of program, quality of staffing, instructional strategies, etc.
2. Studies to identify the relationship between instructional processes and student outcomes in order to determine what types of instructional activities are successful for which types of students, different language groups, different levels of cognitive development, and different settings (NACBE, 1981).

Legarreta (1977) compared the effectiveness of three approaches to bilingual education with the effectiveness of two English-only approaches in developing English communicative competence of Spanish-background children at the kindergarten level. The three approaches were found to be significantly superior to the two English-only approaches in developing English skills. The most effective program of the three bilingual approaches was one with balanced bilingual usage (50 percent English, 50 percent Spanish).

The Southwest Educational Development Laboratory in Texas is two years into a seven-year study that will track the reading progress of approximately 400 children from kindergarten through grade four. Among the learner characteristics they are viewing are cognitive style, cognitive development, degree of bilingualism, and level of linguistic awareness. The second year of their study produced the following implications for the classroom teacher:

1. Look at these children as individuals.

2. Learn all you can about each child’s ability in her/his two languages as well as her/his patterns of language use.

3. Recognize that these children generally have a language that serves them well for interpersonal communication. It is rich in vocabulary and syntactic structures and in the functions of language needed in social interaction.

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

Evidence is mounting that, given favorable circumstances, bilingual education programs can be successful. Cummins (1979) and Troike (1978) have identified programs such as the Navajo-English Bilingual Program in Rock Print, Arizona; the Santa Fe Bilingual Program; and the Nestor School Bilingual Program, where students enrolled in the bilingual program consistently performed significantly better than the control group. These findings are also supported by a series of international studies such as the Sodertalje program for Finnish immigrant children in Sweden (Hanson, 1979), the Manitoba Francophone study (Hébert et al., 1976), and the Edmonton Ukrainian-English bilingual program (Edmonton Public School Board, 1979).

In summary, these studies begin to show that minority children's first-language proficiency can be promoted in school at no cost to the development of proficiency in the majority language. In addition to the studies listed above, other research studies suggest that bilingual children who develop their proficiency in both languages experience intellectual and academic advantages over unilingual children (Cummins, 1979).

The record to date also indicates that bilingual program implementors do not yet operate from an empirically-based theoretical framework for first- and second-language development. Absence of a theoretical framework prevents decision makers from focusing upon the psychosocial and educational factors that influence the school achievement of language minority students. While political and economic factors are also important, basing educational programs solely on such grounds tends to negatively affect the quality of education. Only by clearly understanding what educational attainments are possible for language
minority students can bilingual educators plan for sound educational programs. The synthesis of findings that has been collated and described in the following sections represents an attempt to develop a program for the education of language minority students and the training of their teachers within the research-based theoretical framework.

A THEORETICAL FRAMEWORK FOR COMMUNICATIVE APPROACHES TO SECOND LANGUAGE ACQUISITION

It is often said that language teaching in the past few decades has shifted the emphasis away from "mastery of language use to mastery of language structure" (Brumfit and Johnson, 1979). This emphasis on teaching structure is manifested not only in the audiolingual methodologies but also in syllabi and school district curriculum development.

The language teacher's emphasis on structure has its foundation within linguistics. American linguists, based on Bloomfield's (1933) and Chomsky's (1957) analyses, have restricted themselves to the study of form. This emphasis on form has, in turn, provided only alternative strategies for teaching grammar. Tests are developed based on these same foundations, and success or failure in language learning is measured by the student's ability to manipulate the structures of language.

This heavy emphasis on form has brought about a reaction against the view of language as a set of structures. It is a move toward a view of language as communication, in which meaning and function play a central part (Brumfit and Johnson, 1979). This latter view has become known as the functional approach to communicative competence.
Communicative Competence Theories

In 1972, Del Hymes saw communicative competence as the interaction of grammatical (what is formally possible), psycholinguistic (what is feasible in terms of human information processing), sociocultural (what is the social meaning or value of a given utterance), and probabilistic (what actually occurs) systems of competence.

Shuy (1976) described communicative competence in terms of the following flow-chart (Figure 1).

Figure 1

[Diagram with the following structure:
- Communicative Competence
  - Linguistic Competence
    - Phonology
    - Vocabulary
    - Grammar
    - Semantics
  - Sociolinguistic Competence
    - Oral Interaction
    - Specific Functions
      - Narrative Ability
      - Reference Ability
      - Sequence
      - Style Shifting

(Shuy, 1976, p. 2)
Shuy also represented the form and function distinctions through an iceberg metaphor (Figure 2) and enabled the practitioner to grasp the distinction between "form" and "function." Unfortunately, this representation led many to believe that there was a definite dichotomy between form and function.

Figure 2

A DEEP TO SURFACE REPRESENTATION OF THE LANGUAGE CONTEXT ASPECTS OF LITERACY

<table>
<thead>
<tr>
<th>Linguistic Levels</th>
<th>Miller's Categories</th>
<th>Speaking</th>
<th>Reading</th>
<th>Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface</td>
<td></td>
<td>phonology</td>
<td>decoding</td>
<td>encoding</td>
</tr>
<tr>
<td></td>
<td></td>
<td>morphology</td>
<td></td>
<td>mechanics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>vocabulary</td>
<td>vocabulary</td>
<td>grammar</td>
</tr>
<tr>
<td></td>
<td></td>
<td>syntax</td>
<td></td>
<td>syntax</td>
</tr>
<tr>
<td>Deep</td>
<td></td>
<td>syntax</td>
<td>discourse</td>
<td>cohesion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>discourse</td>
<td>comprehension</td>
<td>semantic/pragmatic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>function</td>
<td>function</td>
<td>meaning/function</td>
</tr>
</tbody>
</table>

(Shuy, 1976, p. 4)

Nevertheless, the iceberg representation was most successful in bringing light two very important points: that the surface elements are those that are taught in English as a Second Language (ESL) classes to students, year after year, as they move from one grade to another; and that the elements under
the water—those that are difficult to see, to measure, and to teach through audioli-jual and grammar-based methods—are the elements that are necessary for students to achieve academically, but are the ones most often ignored.

Canale and Swain (1980) made the "form" and "function" distinction through three categories: grammatical competence, sociolinguistic competence, and strategic competence. According to them, an integrative theory of communicative competence may be regarded as one in which there is a synthesis of knowledge of basic grammatical principles, how language is used in social contexts to perform communicative functions, and how utterances and communicative functions can be combined according to the principles of discourse. These three components can be represented through a flow-chart similar to Shuy's (Figure 3).

The proponents of this framework argue that the primary goal of a communicative approach must be to facilitate the integration of these types of knowledge. That is, teachers should not emphasize one component over another but rather facilitate the student's development of grammatical, sociolinguistic, and strategic competence. Their concept of integration also includes focusing on speaking, listening, reading, and writing rather than on a subset of these skills. Other principles that Canale and Swain (1980) caution teachers to adhere to are:

1. The second-language learner must have the opportunity to take part in meaningful communicative interaction in realistic situations. This is significant not only to classroom activities but to testing as well.

2. Optimal use must be made of those aspects of communicative competence that the learner has developed through acquisition and use of the native language and that are common to those communication skills required in the second language.

Thus, in relation to the theoretical framework, two very significant aspects of communicative competence need to be considered: the distinction be-
Figure 3

COMMUNICATIVE COMPETENCE FOR THE MTTI* MODEL

Communicative Competence

Grammatical Competence  Sociolinguistic Competence  Strategic Competence
Phonology  Topic  Grammatical
Morphology  Role of Participants  Sociolinguistic
Lexical Items  Setting
Syntax  Norms of Interaction
Sentence Grammar  Appropriate Attitude
Semantics  Register

(Adapted from Canale and Swain, 1980)

*Multidistrict Teacher Training Institute (Calderón, 1980)

tween form and function, not as a dichotomy but rather as a training device to pinpoint past misconceptions of teaching techniques, tests, and materials development; and the need the integrate grammatical, sociolinguistic, and strategic approaches within teaching and assessment processes and materials development.

Second-Language Acquisition Theories

Salient features of second-language learning as it has been approached in Europe for some five to eight years are now coming to fruition in the United States. These trends seem to indicate that:
1. Second-language learning is moving away from teacher-centered, creativity-engendering custom-designed approaches.

2. Teachers are abandoning overly simplistic ideas about teaching and learning, including the fallacy of a unique preferred methodology, in favor of a more difficult and complex analysis of individual learner needs.

3. Second-language learning now emerges as a process and a task that requires knowledge of the mind of the learner, the nature of language, and the skill of the teacher (Strevens, 1977).

A popular feature of this theoretical approach is the distinction Strevens (1977) makes between student and teacher roles. The term "acquisition" means learning a language without the benefit of a teacher, and the term "learning" means learning with a teacher. This language learning/teaching process is what current methodologies attempt to deal with. The trend is toward student generated activities and language (acquisition) rather than teacher directed, planned, imposed activities and language (learning). It is also being recognized that "learning" happens through focus on grammar and "acquisition" through focus on function.

Strevens (1977), in describing the British approach, included the following premises:

1. The teacher has a function in the total intellectual and moral development of learners, not just their language.

2. English is a part of the total curriculum.

3. The choice of content in the syllabus, its arrangement, its principles of grading are carried out with more flexibility. A prior selection of language items to be taught is generally arrived at first, then this is integrated with an inventory of topics, roles, contexts, and situations.

4. That which is selected for teaching is expected to be supplemented by whatever emerges from the topics, roles, contexts, or situations.

5. A distinction between form and function is made so that it is not only the meaning of a sentence that is taught but also its value as an utterance.

6. The student is at first spoon-fed by either the teacher or the materials but later both controlled and "natural" materials are presented.
The control at this later stage concentrates on areas of deficiency in learners' knowledge.

7. Don't just satisfy the learners, stretch them.

8. Grammar is taught explicitly only if it is helpful.

9. The teacher disposes of a wide array of teaching techniques, including full-class techniques, group techniques, and individual techniques.

10. The good teacher brings to the language learning/language teaching situation the establishment of confidence, morale, interest, and motivation.

These premises have now evolved into an even more student-generated/teacher-facilitated approach. In the United States, Krashen (1979, 1981) has encapsulated these theoretical premises into five hypotheses:

1. The acquisition-learning hypothesis states that there are two separate processes for the development of ability in a second language: acquisition, which is similar to the way children develop their L1 competence; and "learning," which is an explicit presentation of rules and grammar and emphasizes error correction.

2. The natural order hypothesis states that students acquire (not learn) grammatical structures in a predictable order.

3. The monitoring hypothesis states the relationship between acquisition and learning. Acquisition is far more important and develops fluency, but conscious learning can be used as an editor or monitor.

4. The input hypothesis says that: (1) The student acquires by understanding language that contains input containing structures that are a bit beyond the acquirer's current level. (2) The student acquires structure by focusing on meaning to understand messages and not focusing on the forms of the input or analyzing it. (3) The best way to teach speaking is simply to provide comprehensible input, from which speaking fluency emerges. It is not taught directly; also, there should be a silent period before they are ready to talk. (4) The best input should not be grammatically sequenced, but provide situations involving genuine communication with structures being constantly provided and automatically reviewed.

5. The affective filter hypothesis deals with the effects of personality, motivation, anxiety, self-confidence, etc., of a student. Acquirers in less than optimal affective states will have filters, or mental blocks, preventing them from utilizing input fully for further language acquisition (Krashen, 1981).
According to Krashen (1981), in applying these hypotheses to bilingual education, three requirements must be addressed: (1) provide comprehensible input in the weaker language, (2) maintain subject matter, and (3) maintain and develop the first language. He stresses that providing comprehensible input is not just providing ESL classes. Not all teaching methods provide comprehensible input in a second language (i.e., grammar-translation and audiolingual methods). Both theory and practical experiences now confirm that repetitive drill does very little for acquisition; and grammar approaches, shown to be ineffective for adults, are even less effective for children. To counteract the grammar trend, Krashen has captured the essence of a more natural approach to second-language acquisition--one that uses grammar only when necessary, and only as a self-monitoring device. The "natural approach" (Krashen, 1981) to second-language acquisition is presently being field tested at the elementary and secondary levels, but has already demonstrated considerable success and acceptance at the university level and as a bilingual teacher training device.

The Need to Focus on Strategic Competence

According to Canale and Swain (1980), with the exception of Savignon (1972) and Stern (1978), no communicative competence theorists prior to 1980 had devoted any detailed attention to communication strategies that speakers employ to handle breakdowns in communication: for example, how to deal with false starts, hesitations, and other performance factors; how to avoid grammatical forms that have not been mastered fully; how to address strangers when unsure of their social status--in short, how to cope in an authentic communicative situation and keep the communicative channel open.

This gap in strategic competence can now be filled through the Strategic Interaction Model that Di Pietro (1979; Calderón et al., 1981) has been
Di Pietro's Strategic Interaction Model is based on the following premises:

1. People have individual interests and needs in communication not always shared by those with whom they speak.

2. Conversational interactions have a strategic dimension that underlies what is said and is more than the semantics of the verbal content.

3. Discourses, whatever their duration, take place within long-term scripts that are individualized and characterized by differing amounts of shared information (Di Pietro, 1979).

He also identifies three dimensions of conversational discourse:

1. The formal dimension, in which conversations are viewed as conveying referential meaning; this dimension is open to grammatical analysis and semantic interpretation;

2. The transactional dimension, by which participants utilize the language to motivate actions in their favor; here, we look at what is said by the participants as the implementation of strategies, protocols, and counter strategies;

3. The interactional dimension, dealing with how conversations reflect the execution of roles of various types.

Each of these dimensions is elaborated through a systematic process. The strategic value of verbal messages is indicated and analyzed. Basically, there are two types of strategic language: psychologically motivated ploys and socially or ritually motivated protocols. In other words, in order to communicate in any language, it is necessary to acquire not only the protocols dictated by conventions of conversation but also a repertoire of verbal strategies for use in various settings. The latter are shared by all persons who function within a society and include such expressions in English as: "excuse me," "thank you," "good morning," and "don't mention it"; or in Spanish as: "¿Qué tal?" "¡Qué bueno!" and "Adiós." Such expressions are ritualized because social structure dictates their use in certain well-defined circumstances. Psychologically motivated strategies derive from the personal choices individuals make in order to assert a position. Thus, the use of a command
form as a politeness protocol conveys a different conversational stance than one that employs a modal verb (Calderón et al., 1981).

The pedagogical device Di Pietro (1979) has created to develop strategic competence is the "open-ended scenario." This device shares characteristics with "role-plays" suggested by Clark (1980) and Paulston and Bruder (1976), but neither of these offer any guidelines or indications as to how to develop them for classroom use and follow-up activities. Di Pietro identifies two axes of classroom practice in the Strategic Interaction Model: (1) the elaborative axis (referring to what the teacher decides to drill through various exercises without moving on to new points), and (2) the consecutive axis (proceeds, with time, from one point to another).

In the Strategic Interaction classes, the elaborative axis is reserved for grammar and structural work while the consecutive axis is dedicated to the advancement of conversational language (Calderón et al., 1981). In contrast to role plays by Clark (1980) and Paulston and Bruder (1976), the Strategic Interaction Model provides: (1) guidelines for preparation and construction of scenarios; (2) a process for the dialogue development (on-stage); and (3) analysis of the formal, transactional, and interactional dimensions (debrieing stage). Follow-up reading and writing techniques are also built into the model.

A systematic approach for training teachers to convert the Strategic Interaction Model into classroom practices has been developed by the Title VII Materials Development Center for Bilingual Curriculum (Calderón et al., 1981) and is being field tested in colleges and school districts. A final revised version will be published in 1983.

In conclusion, a theoretical framework for communicative competence should:
1. Distinguish between form and function, not to dichotomize the construct but for teacher training and materials development.

2. Consider grammatical, sociolinguistic, and strategic development.

3. Contain basic principles of second-language acquisition theory.

4. Consider the students' level of primary language.

The theoretical underpinnings for the first three items have already been presented. The next step is to unify the relationship between first- and second-language development processes. In the following section, Cummins (1981) analyzes this relationship and presents a framework that merges communicative competence with bilingual education.

A FRAMEWORK FOR BILINGUAL EDUCATION

Cummins concurs with the Canale and Swain (1980) theoretical framework but expands this concept to include the developmental interrelationships between academic performance and language proficiency in both L1 and L2.

Central to Cummins' theoretical model of bilingualism is the concept of language proficiency. In earlier publications, Cummins (1979, 1980a, 1980b) divided language proficiency into two dimensions: basic interpersonal communicative skills (BICS) and cognitive/academic language proficiency (CALP). Although BICS and CALP soon became quite controversial, they did serve to pinpoint past fallacies about language proficiency and teaching methodologies that concentrate too much on BICS and almost ignore CALP.

These theoretical constructs were advanced to explain a common yet difficult-to-explain phenomenon in the classroom: students who seem to be fluent in English but who fail to achieve on academic tasks. These students may be native or non-native speakers; and their lack of performance is often attributed to learning handicaps, low socio-economic status, lack of motivation,
low intelligence, etc. Although these may be reasons for the poor performance, the lack of language skills required specifically for success in academic domains is basic to these students' failure. Teachers and parents often express frustration with students who appear to have language skills developed as well as any classmate yet are performing below average on academic tasks. These students get along with their peers, talk in class, relate on the playground, and seem to understand the teacher's directions. It is not uncommon to hear teachers say that these students understand everything; therefore, language is not the problem and they should be referred instead to be tested for learning disabilities.

Given Cummins' two dimensions of linguistic proficiency, it is possible to see that children's ability to use language to informally relate with teachers, peers, family, etc. (BICS), is quite different from the language ability required for literacy, manipulation of abstract concepts, comprehension of formal English, or functioning at any but the lowest cognitive levels as identified by Bloom's (1956) Taxonomy (CALP). Indeed, children may have developed BICS while continuing to be deficient in CALP. Such children would appear to be fluent speakers in informal conversation but deficient in language skills required for competence on academic tasks.

Originally, Cummins' BICS-CALP distinction was intended to show that academic deficits are often created by teachers and psychologists who fail to realize that language minority students need more time to attain grade/age-appropriate levels in English academic skills than English face-to-face communicative skills. However, such a dichotomy lent itself (as did Shuy's) to many misinterpretations.
BICS and CALP Revisited

Cummins did not see BICS and CALP as dichotomous but rather as stages in a developmental process. Communication can range from simple everyday interaction to more complex situations such as negotiating or convincing. Reading, writing, math, and science activities can also range from simple to complex and cognitively demanding tasks.

The revised Cummins framework (Cummins, 1981), presented in Figure 4, proposes that in the context of bilingual education in the United States language proficiency can be conceptualized along two continuums. The horizontal continuum relates to the range of contextual support available for expressing or receiving meaning. The extremes of this continuum are described in terms of "context-embedded" versus "context-reduced" communication. In context-embedded communication the participants can actively negotiate meaning (i.e., by pro-

Figure 4
RANGE OF CONTEXTUAL SUPPORT AND DEGREE OF COGNITIVE INVOLVEMENT IN COMMUNICATIVE ACTIVITIES

(Cummins, 1981, p. 12)
viding feedback that the message has not been understood), and the language is supported by a wide range of meaningful paralinguistic (gestures, intonation, etc.) and situational cues. Context-reduced communication, on the other hand, relies primarily (or at the extreme of the continuum, exclusively) on linguistic cues to meaning and may in some cases involve suspending knowledge of the real world in order to appropriately interpret (or manipulate) the logic of the communication (Cummins, 1981).

The vertical continuum addresses the developmental aspects of communicative proficiency in terms of the degree of active cognitive involvement in the task or activity. Thus, the upper parts of the vertical continuum consist of communicative tasks and activities in which the linguistic tools have become largely automatized (mastered) and thus require little active cognitive involvement for appropriate performance. At the lower end of the continuum are tasks and activities in which the communicative tools have not become automatized and thus require active cognitive involvement or strategic competence in Di Pietro's (1979) terms. Persuading another individual that your point of view is correct or writing an essay on a complex theme are examples of such activities. In these situations, it is necessary to stretch one's linguistic resources (i.e., grammatical, sociolinguistic, and strategic competencies) to the limit in order to achieve one's communicative goals. Obviously, cognitive involvement, in the sense of amount of information processing, can be just as intense in context-embedded as in context-reduced activities. As specific linguistic tasks and skills are mastered in L2, they move up the vertical continuum (Calderón and Cummins, 1981).
Interdependence of L1 and L2

There is considerable evidence that L1 and L2 proficiency are interdependent (Cummins, 1979). Reading scores typically correlate highly with one another in bilingual programs and many studies consistently demonstrate that older learners whose L1 CALP is better developed, acquire L2 CALP more rapidly than younger learners.

The Cummins framework (1981) is built on these findings and stresses the utilization of cognitively-demanding, context-reduced tasks in L1 in order to ensure their transferability to L2. He also stresses that, even though many sociolinguistic roles of face-to-face communication are language-specific, many L1 and L2 sociolinguistics skills for context-embedded situations are also transferable.

In conclusion, Cummins' (1981) continua incorporate a developmental perspective reflective of the components of communicative competence (grammatical, sociolinguistic, and strategic) discussed by Canale and Swain (1980) and Calderón et al. (1981). Cummins also points out that within each one, some subskills are mastered more rapidly than others. In other words, some subskills (i.e., pronunciation and syntax within L1 grammatical competence) reach plateau levels at which there are no longer significant differences in mastery between individuals (at least in context-embedded situations). Other subskills continue to develop throughout the school years and beyond, depending upon the individual's communicative needs in particular cultural and institutional milieux. In accordance with Strevens (1977) and Krashen (1979, 1981), students need to be continuously exposed to tasks that are a bit beyond the acquirers' skill levels. The important distinction that Cummins (1981) makes through BICS and CALP and the cognitive/context continua is that there is more to second-language acquisition than just fluency.
A COMPOSITE MODEL FOR TEACHER TRAINERS

In 1980 a model for training teacher trainers in Title VII bilingual programs* was introduced in the Riverside and San Bernardino counties of Southern California. Experts in the fields of first- and second-language acquisition collaborated with experienced bilingual teachers, resource teachers, and project coordinators to produce the following composite of theory, practice, and training technology (Figure 5).

The Cummins (1981), Canale and Swain (1980), Strevens (1977), and Krashen (1979, 1981) theories formed the foundation for the principles and premises. Di Pietro's (1979) theories and his Strategic Interaction Model also served as monitoring devices on which to measure the development of language proficiency. Directly under the theoretical foundation, BICS and CALP were dichotomized for purposes of plotting popular methodologies and stressing the importance of different treatments for different students.

The BICS Column

On the left side, methods for L2 instruction are plotted along a Non-English-Proficient/Limited English Proficient (NEP/LEP) student progression. For example, the Total Physical Response Approach (Asher, 1969, 1977, 1982) is a good initial approach to use with NEP students. However, the Total Physical Response will not enable students to acquire the degree of context-reduced/cognitively demanding strategies that are acquired through a Functional-Notional or Strategic Interaction Model. The latter two second-language acquisition approaches may be seen as a means to provide the students with what can be termed as the highest level of BICS.

*Multidistrict Teacher Training Institute (MTTI)
The Construct of Bilingual Education Defined (Cummins, 1981)

Communicative Competence Theoretical Notes (Canale and Swain, 1980)

L₂ Acquisition Premises Streuven (1977) and Krashen (1981)

Instruction in L₂ L₂ Acquisition Monitoring System Di Pietro (1978)

Instruction in L₁

BICS or Contextualized

Total Physical Response

Natural Approach

Language Experience Approach

Confluent Approach

Functional-Notional

Strategic Interaction Model

Social Models of Teaching

Total Physical Response; Natural Approach; Language Experience Approach; Confluent Approach; Functional-Notional; Strategic Interaction Model

Social Models of Teaching

L₁ and L₂

Information Processing Models

Inductive Thinking Inquiry Training Science Inquiry Concept Attainment Advance Organizer Developmental

Personal Models of Teaching

Nondirective Awareness Training Synectics Conceptual Systems

*Multidistrict Teacher Trainers Institute
A horizontal line cuts across the Natural Approach (Krashen, 1981; Terrell, 1981), Language Experience Approach (Stauffer, 1970), and Confluent Approach (Galyean, 1976) to indicate that these methods can be used at initial stages with NEP students as well as in the later stages with LEP students. They do not reach the higher levels as do the Functional-Notional and Strategic Interaction Model; but on the other hand, the Functional-Notional (Finnochiaro, 1979) and Strategic Interaction models need the support of these approaches in the initial stages of language acquisition.

After field testing these approaches, it was found that students who had achieved proficiency still needed a device to ease them into a regular classroom. After a review of the literature, it became evident that the Joyce and Well Social Models of Teaching focused on developing the equivalent of BICS. Thus, a new phase has been included recently in the model to ensure the transfer of BICS into the regular all-English classroom.

**The CALP Column**

The right side of Figure 5 indicates that while instruction in L2 (left side) is taking place through any of those approaches, instruction in L1 must be doubly emphasized through a combination of strategies according to students' level of development in L1. For example, if a NEP student, age 10, has recently arrived from Mexico with a high academic background, that student might be prescribed the following in L1: the Strategic Interaction Model and the Social Models of Teaching for cultural and social awareness and appropriate functioning, and the Information Processing Models to further develop cognitive/academic skills. Another example might be a NEP student entering first grade coming from an all-English kindergarten. This student could probably benefit from the Total Physical Response, Natural Approach, or Language
Experience Approach even in L₁. As the student becomes more secure and re-acquainted with his/her own language, other approaches can be employed.

The Joyce and Well Information Processing Models (1978a, 1978b, 1980) have been added to the CALP column in Figure 5 as teaching strategies for providing cognitively demanding context-reduced tasks in L₁. Most students are not in bilingual programs long enough to truly develop CALP in L₁. In field testing this model, the option for instructing through the Information Processing Models in L₁ or L₂ had to be given. Either school district policy dictated an early exit out of L₁ or teachers were not comfortable teaching through these models in L₁.

Corollaries

The following corollaries were written to accompany the model:

NEP, LEP, and Fluent English Proficient (FEP) Students

1. NEPs must be developing CALP in L₁ while developing BICS in L₂.

2. The ambiguous LEP will have to develop CALP in either L₁ or L₂. (This is contingent on L₁ prestige in immediate environments.)

3. This process is just as applicable to the FEP student as it is to any student.

Methods and Teaching Models

1. The NEP L₂ techniques do not teach CALP.

2. The LEP L₂ techniques (Functional-Notional, Strategic Interaction Model, Natural Approach, and Language Experience Approach) bridge into CALP and teach CALP.

3. The Information Processing Models are the best means to teach CALP.

4. Any of the methods listed for NEPs or LEPs must be correlated with the construct of bilingual education: Communicative Competence Theory, L₁ Premises, and the Monitoring System. Otherwise, they can become isolated techniques for ESL, unmonitorable, unassessable, and unsuccessful.
Caveats

Certain caveats evolved as the model was implemented:

1. How many $L_1$ teachers are familiar with the Information Processing Models?

2. How many $L_1$ teachers are proficient enough in $L_1$ to teach through those models?

3. How can we ensure that programs (IHEs, districts, and training centers) are willing to teach to CALP in $L_1$?

A major limitation for fully implementing this model is the transitional mode of current bilingual programs and the lack of teachers who can teach effectively in $L_1$. In a recent newsletter article, Blanco (1981) noted that bilingual teachers have often found themselves inadequately prepared to deal with many concepts in $L_1$ in classroom situations. He found that research studies, professional literature, class lectures, and in-service programs are almost exclusively in English. When teachers use English for oral communication: i.e., talking to one another in the hall or in the lounge, speaking to aides, and giving students directions for getting in line for the cafeteria, he found that students quickly conclude that English is the language of prestige.

In trying to implement a framework such as the one described above, teacher trainers may not have an immediate voice in a district's transitional program but they can at least begin to remedy the situation in terms of teacher preparation in $L_2$.

Implications for Teachers and Teacher Trainers

It is characteristic of bilingual education to deal with an indefinitely large range of different learners, different teaching/learning conditions, and different aims. Yet, in another sense, bilingual education is concerned with single individual learners, with their unique personal abilities and qualities, with individual teachers, and with a particular set of surrounding circum-
stances. A framework for bilingual education must deal both at the macro level with the range of variables that enhance or impinge upon its implementation and at the micro level with the particular features of learners and teachers.

Adoption of the theoretical frameworks have implications in five areas of language teaching: syllabus (or core curriculum), design, materials development, teaching methodology, and teacher training.

Syllabus Design and Materials Development

Most college syllabi and school district continua (scope and sequence) are currently grammar based. Canale and Swain (1980) point out that students who are uninterested, frustrated, and perform poorly in a grammatically organized second-language program may be encouraged and motivated in a program with a functional syllabus. Also, a more natural integration of grammar, sociolinguistic, and strategic elements will occur through a functional syllabus.

There are two alternatives for syllabus designers: one is to throw out existing materials and the other is to review and revise or adapt the framework philosophy into existing syllabi and materials that complement it. A resource for facilitating this development or adjustment is The Threshold Level (Van Ek, 1976), in which he provides inventories of functions, notions, as well as lexical and structural items. These items can then be acquired through the approaches described earlier.

Teaching Methodology and Teacher Training

The considerable quantity and complexity of this training needs to be subdivided into two components: content and process. Content should consist of theory, research, and the process of application and skill acquisition. It should involve several disciplines: linguistics, psychology, sociolinguistics, psycholinguistics, social sciences, and education, with constant up-to-date information reality checks.
The process can be carried out through activities that give teachers opportunities for actual performance.

1. Observation of specially-devised demonstrations, both of specific techniques and of complete lessons.
2. Observation of actual classes.
3. Practice in preparation of lesson plans for various contingencies.
4. Micro-teaching: the teaching (by the trainee) of specific items or techniques, possibly with the use of closed-circuit television and videotape recordings.
5. Peer-group teaching (i.e., teaching fellow-trainees) as a form of exercise.
6. Acting as a teacher's assistant in a real class.
7. Teaching real classes under supervision.
9. Long-term apprenticeship in a school, with attachment to an experienced teacher.
10. Posttraining, inservice courses of various kinds.

(Strevens, 1977)

Training is a highly complex activity that requires knowledge, practice, and experience before it can be effectively carried out. A flow of the proper training activities to ensure implementation of the framework and its implications can follow the Joyce and Showers (1981) process as outlined in Figure 6.

This training process is presently being utilized to train bilingual teachers to teach effectively through the Social Models of Teaching (Joyce and Well, 1978c), Information Processing Models (Joyce and Well, 1978a), and the Personal Models of Teaching (Joyce and Well, 1978b). As Krashen's research supports, the best approach (to second language instruction) might be one in which both learning and acquisition are fully utilized in the classroom. With teacher training, the same principle applies.
Unfortunately, because most teacher training preservice programs are learning oriented, insufficient acquisition of classroom procedures occurs. On the other hand, teacher inservice programs concentrate on practical teaching and exclude theory. It is important to remember to apply the principles of learning and acquisition to the training of our teachers as well as our students.
Transfer of Training

Joyce and Showers (1981) recently completed a meta-analysis of over 200 research studies on effective training strategies. Their research results (Figure 7) indicate that one-day isolated approaches to training that only present information ensure only 10 percent actual classroom use. Even if a technique or skill is modeled in peer-practice sessions, and teachers receive expert feedback, sufficient transfer of training does not occur.

Figure 7

TRANSFER OF TRAINING FOR MTTI SESSIONS*

<table>
<thead>
<tr>
<th>Training Mode</th>
<th>Skill Acquisition by Trainees</th>
<th>Level of Transfer into the Workplace</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theory</td>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td>Modeling</td>
<td>50%</td>
<td>5%</td>
</tr>
<tr>
<td>Practice &amp; Feedback</td>
<td>90%</td>
<td>10-25%</td>
</tr>
<tr>
<td>Coaching</td>
<td>90%</td>
<td>75-100%</td>
</tr>
</tbody>
</table>

*Presented by Bruce Joyce at the Multidistrict Teacher Training Institute, Juruta, California, 1981.

Furthermore, Joyce and Showers (1982) found that most training programs do not assist their trainees in adapting new approaches to the various kinds of content and students. They advocate the use of coaching teams during the training process.

As described by Joyce and Showers (1982), the coaching process involves five major functions:
1. The Provision of Companionship

This relationship provides opportunities for mutual reflection, the checking of perceptions, the sharing of frustrations and successes, informal thinking-through of mutual problems, and reassurance that problems are normal.

2. The Provision of Technical Feedback

During training the team members provide feedback to one another by pointing out omissions, examining materials, etc. Technical feedback helps ensure that growth continues through practice in the classroom. It is also beneficial to the person giving it. By watching someone else, the person can reflect on his/her own processes and acquire new ideas.

3. Analysis of the Application

During the transfer period teachers learn when and how to use a new model and what should be achieved by their use. Coaching teams examine curriculum materials and plans to determine what models best fit their needs.

4. Adaptation to the Students

Successful teaching requires positive student response. A model that is new to a group of students may cause trouble. The coach can help to "read" the response of the students and adapt the model to their needs. This is particularly important in the initial stages of practice when teachers are concentrating on the process or content of the model and cannot keep watch on all students.

5. Facilitation

When practicing new skills, teachers are less competent than with existing skills. Students sense this uncertainty and may react uncomfortably. The expression "I tried that method and it didn't work" refer as much to the dismay over those early trials as it does to the actual success or failure of the method itself. One of the major jobs of the coaching team is to help its members feel good about themselves as the early trials take place.

In summary, the function of the coach is to apply analytical and interpersonal skills for the purpose of mobilizing teachers toward increased competency in the art and science of teaching. Although studies on coaching have indicated that positive results lead to positive change in classroom behavior, further studies are needed for analyzing the critical elements of the coaching process (Wald, 1980; Joyce and Showers, 1982; Gower, 1981).
An ethnographic study on the organizational structure and nature of the constitutive components of coaching and their respective functions is currently being undertaken through the Riverside/San Bernardino Multidistrict Teacher Trainers Institutes. This study, together with a pilot program, is expected to yield new information for developing training programs that maximize transfer of skills from training exercises to real-life situations.

CONCLUSION

Most educators, legislators, parents, and community members would agree that the goal of bilingual programs is to allow language minority students to develop the highest possible degree of language, academic, and social skills necessary to be fully functional in all aspects of life.

The task of educating language minority students is not simple. Nevertheless, the theories and frameworks presented here demonstrate that under certain conditions, quality programs can be accomplished. In order to successfully implement these programs, educators, legislators, and parents must be acquainted with empirical evidence in order to counteract myths and misconceptions about bilingual education. Most importantly, as teacher trainers, we must rely on empirical evidence to guide our professional decisions in selecting and implementing instructional programs for language minority children.
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RECOMMENDED READINGS

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