

GETTING INTO THE MAINSTREAM: APPROACHES TO ESL INSTRUCTION FOR STUDENTS OF LIMITED ENGLISH PROFICIENCY

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1. LIMITED ENGLISH PROFICIENCY STUDENTS

A major focus of English as a Second Language programs in many parts of the world is preparing students of limited English proficiency (LEP students) to cope with school instruction in English. In many urban settings, there are large school-age populations of children with minimal or restricted language proficiency, for whom schooling is available only in English. The options available at the school level vary according to school or district policy, school and teacher resources, and the age, background, and numbers of children involved. Students may receive an intensive ESL program before being mainstreamed, or they may enter classes which parallel regular classes in subjects such as science or social studies, but are designed for ESL learners.

In their mainstream classes, LEP students are expected to progress in school work at the same time as other children of their age, despite not having a full command of the linguistic medium through which school subjects are being taught. In designing ESL programs which enable the LEP student to make a successful transition to the mainstream classroom, many issues arise. What is the nature of the mainstream classroom? How can the ESL curriculum support the mainstream curriculum? What demands does content learning place on LEP students? In this paper the nature of these problems will be examined, drawing both on analytic reviews of research on classroom learning, as well as an observation of LEP students in mainstream classroom setting.

2. TRADITIONAL APPROACHES TO ESL INSTRUCTION FOR LEP STUDENTS

Traditional approaches to ESL instruction for students of limited English proficiency focused almost exclusively on language proficiency. For example, the New York State Core Curriculum for English as Second Language in the Secondary Schools (University of the State of New York 1983) sets out to specify the language skills needed for "limited English proficient students [to] attain communicative and linguistic competence." The curriculum lists goals for Listening, Speaking, Reading, Writing, and Culture across four levels of instruction, and specifies listening, speaking, reading, and writing skills, grammatical structures, vocabulary, and cultural topics for each level.

The assumption underlying this kind of curriculum is that in order to succeed in the regular school system, what the LEP student needs is further instruction in English. Cummins (1981:4) characterizes this approach in these terms:

Lack of English proficiency is the major reason for language minority students' academic failure ... When students have become proficient in English, then they can be exited to an all-English program, since limited English proficiency will no longer impede their academic progress.

In a language-based approach of this kind, learner needs are defined in terms of language skills, there is a primary focus on linguistic or communicative competence; language mastery is

seen as the key to content learning and academic achievement, and there is typically a separation of language learning from content learning (Mohan 1986).

In recent years, however, there has been an increasing recognition that a language-skill approach reflects only part of the learners's total needs. Researchers and educators have stressed that if the goal of an ESL program is to prepare students to participate in the regular school curriculum, it is necessary to examine more closely the relationship between language skill and academic achievement (Crandall 1987; Tikunoff 1985; Cummins 1981).

3. LIMITATIONS OF TRADITIONAL APPROACHES

Cummins (1981) has explored the relationship between language proficiency and academic and cognitive development. The focus of Cummins' work has been on the nature of learning in school contexts. He observes that the skills needed for social interaction in the school are not necessarily the same as those needed for academic success. Cummins attributes this to differences in the cognitive demands of social-interactive and academic tasks. He distinguishes between two contexts for language use. Social interaction uses of language, such as face-to-face conversation, are regarded as 'context-embedded', since they are supported by the situation and by paralinguistic cues, and allow for negotiation and feedback. Many academic tasks, however, such as reading or listening to a lecture, are regarded as 'context-reduced', since the learner is forced to rely primarily on linguistic cue to meaning.

Cummins argues that academic success is dependent upon the ability to use language in context-reduced situations, whereas many ESL programs focus primarily on using language in context-embedded settings. One consequence is that a learner may appear to be fluent in English but still have difficulty coping with the demands of the mainstream classroom. A common conclusion is that because the LEP student is apparently fluent in English, poor academic performance cannot be attributed to the issue of language proficiency. Learning difficulties are consequently attributed to deficient cognitive abilities or a lack of motivation.

The work of Brown, Anderson, Shillock, and Yule (1984) offers a complementary perspective on the nature of classroom discourse and the relationship between discourse management skills and classroom learning. They examined the oral language skills of native speakers of English in Scottish classrooms, and found that many native speakers lack the ability to use oral language effectively as a basis for classroom learning. Many students, while fluent in the interactional uses of language, lacked control of the discourse performing tasks which required the coherent organization and presentation of specific information, tasks which the authors argue are basic to school achievement across the curriculum.

Saville-Troike (1984) examined how language proficiency and academic achievement are related. She found that ESL students' academic achievement in the content areas was not a function of their English proficiency. Performance on language tests did not predict performance on content-based tests, nor did accuracy in English morphology and syntax affect academic performance. Among the conclusion she draws are

1. Vocabulary knowledge in English is the most important aspect of oral English proficiency for academic achievement. Vocabulary taught in ESL should therefore be related as closely as possible to students' learning needs in their subject matter classes.
2. The portions of ESL lessons which focus on structural patterns, especially on English morphology, appear to make a little contribution towards meeting students' immediate academic needs. (Saville-Troike 1984:216)

Saville-Troike concludes that ESL programs have too often taught English as an end in itself rather than as a means to an end. They consequently fail to focus on the kinds of learning students encounter in regular classes. Mohan similarly observes that

Any educational approach that considers language learning alone and ignores the learning of subject matter is inadequate to the needs of these learners ... What is needed is an integrative approach which relates language learning and content learning, considers language as a medium of learning, and acknowledges the roles of context in communication. (Mohan 1985:1)

In order to develop such an approach, it is necessary to examine the nature of classroom learning and to consider the demands the mainstream classroom creates for students of limited English proficiency. Many accounts have been given in recent years of the nature of classroom interaction and the processes which characterize classroom events (Barnes et al. 1969; Cazden 1972, 1987; Doyle 1983). Researchers from a variety of persuasions have examined classrooms in order to understand how learning is organized and accomplished. This research suggests that three crucial dimensions of classroom learning determine the success with which the LEP student can participate in the mainstream classroom.

First, there is the *interactional dimension*. This is the ability to understand and use the social rules of classroom discourse in interacting with both peers and teachers. This requires knowledge of rules and norms for initiating and maintaining communication with peers and teachers and the skills needed to socialize into the community of the classroom and school.

Second, there is the *instructional task dimension*. This is the ability to understand the nature of classroom learning and the manner in which classroom learning is accomplished. The primary focus here is on the kinds of learning tasks which recur across subject areas in the school curriculum.

Lastly, there is the *cognitive dimension*. This is the ability to understand and assimilate concepts, schemata, and information crucial to the content of different school subjects.

Tikunoff describes the ability to operate in these three dimensions of classroom behavior as constituting “students’ functional proficiency” (1985:4). These dimensions of student functional proficiency will be reviewed here in more detail.

4. INTERACTIONAL DEMANDS OF THE MAINSTREAM CLASS

For children to be able to participate in a mainstream classroom, they need to possess the social skills which enable them to initiate contact both with English-speaking classmates and with the teacher, and to learn to manage such contact in appropriate ways. Wong-Fillmore (1982) and Schinke-Llano (198) found that when a mainstream class contains LEP students, the teacher tends to focus his or her attention on the English-speaking children in the classroom and to make relatively few demands on LEP children. In addition, LEP children tend to interact more frequently with other minority language children using their mother tongue. The LEP children are not called on frequently to respond and so do not receive the same degree of input or feedback as English-speaking children. In addition, by not interacting with English-speaking children, minority children are deprived of a major source of input for language development—the language of peers.

Another aspect of the interactional demands of the classroom concerns distinguishing between appropriate times for movement around the class and for individual seatwork. Philips (1972) compared differences between American Indian and non-Indian first grade classroom behaviors. The Indian children failed to remain at their desks during seatwork and instead wandered freely around the room. They spoke to other students while the teacher was talking and seemed more interested in interacting with their peers than with the teacher.

In other words, there is, on the part of Indian students, relatively less interest, desire, and/or ability to internalize and act in accordance with some of the basic rules underlying classroom maintenance of orderly interaction. Most notably, Indian students are less willing than non-Indian students to accept the teacher as director and controller of all classroom activities. They are less interested in developing the one-to-one communicative relationship between teacher and student, and more interested in maintaining and developing relationships with their peers, regardless of what is going on in the classroom. (Philips 1972:377)

Different perceptions of rules for turn-taking have also been observed. Both American Indians (Philips 1972) and native Hawaiians (Gallimore et al. 1974) have been found not to observe American norms for bidding for turns. Children in both these groups tend to speak without raising their hand. At the same time, while Chinese or Filipino students may be comfortable giving silent attention to a dominant classroom authority figure, they may appear to lack initiative. In their own cultures, they are expected to wait to be called on, and to answer only when they are sure of being right (Cheng, unpublished, and Teruya and Wong 1972). The experience of being singled out to respond individually may be comfortable for students of some cultural backgrounds for different reasons. Some children (such as Native Americans and Hawaiians) are more accustomed to functioning in a peer group, while others, such as Asians, may have learned to value humility and to avoid seeming to 'show off'. Similarly, non-verbal attention-getting strategies of Filipino and other students reveal a reluctance to call attention to oneself unnecessarily.

The child's understanding of what learning entails and how knowledge should be demonstrated presents another potential area of difficulty for minority students. For the American Indian children observed by Philips, learning consisted of observing adults silently and then imitating them, as opposed to the verbal displays of knowledge called for in the teacher-centered questioning which characterizes mainstream classrooms. This can lead to misinterpretation of minority student behaviors. Forman (1975) reports that a Filipino boy was judged by American teachers to be 'hanging around', while Filipino teachers saw him as 'listening attentively'. In another case, a young Chicana was thought by her teacher to be unresponsive and a slow learner, until a videotape revealed that she spent much of her time interacting with other students and avoided direct interactions with the teacher (Carraso 1981).

The demands of both individual and group work can also present difficulties for students from different backgrounds. Children from strong peer-group cultures may not initially perform well on individual tasks. Conversely, children accustomed to a highly competitive education system which values individual scholastic achievement may find it difficult to work cooperatively in groups.

5. TASK DEMANDS OF THE MAINSTREAM CLASS

The focus in this section is on the nature of classroom work, the demands such work creates, and how such work is handled by children. What is it that children are required to do in order to participate effectively in classroom work, and how is the student of limited English proficiency affected by the demands of class tasks?

Numerous attempts have been made to analyze the nature of classrooms learning. Moore et al. (1986) isolate nine essential thinking processes that characterize classroom learning.

Calling up	Monitoring
Connecting	Reviewing
Predicting	Evaluating
Organizing	Applying
Imaging	

These processes describe the role of the learner in bringing different informational schemata to bear on new material encountered in the classroom, through calling up prior knowledge and using it both to predict the new content of a lesson and ‘to connect’ the content to more familiar information. Retention of the new material is aided by organizing it into a comprehensible framework, associating it with different images, monitoring for comprehension, and reviewing. Finally, the new knowledge is applied to different situations. While proficiency in these different processes can facilitate learning, the familiarity of different learners with strategies for mastering them cannot be taken for granted, less effective learners may, for example, approach each task or set of information either without relating it to existing schemata or without recognizing when features of tasks or materials do not match the schemata. Similarly, a subject may lack monitoring and reviewing strategies or may not perceive the applicability of different processes or information to new situations.

Doyle (1979, 1983) approaches the nature of classroom learning by describing the school curriculum as a collection of ‘tasks’.

The term ‘task’ focuses attention on three aspects of students’ work: (a) the products students are to formulate, such as an original essay or answers to a set of test question; (b) the operations that are to be used to generate the product, such as memorizing a list of words or classifying examples of a concept; (c) the ‘givens’ or resources available to students while they are generating a product, such as a model of a finished essay supplied by the teacher or a fellow student. Academic tasks, in other words, are defined by the answers students are required to produce and the route that can be used to obtain these answers. (1983:162)

Doyle points out that the typical labels used to describe classroom tasks are informative. What is meant by ‘writing’ in one class may refer to students copying model compositions from the board and making minor additions to it, while in another it may refer to a process by which students choose a topic to write about, generate ideas about it, and then go through a cycle of drafting and revising to produce a final product. Doyle suggests that school work is defined by a core of basic tasks which recur across classrooms as well as the conditions for its success. They determine how information is to be processed, how learning will occur, and how the results of learning will be demonstrated.

Doyle demonstrated four tasks as central to all classroom work:

1. memory tasks, which require students to reproduce previously presented information.

2. procedural or routine tasks, in which students are expected to apply fixed routine or procedures in order to generate answers.
3. comprehension or understanding tasks, in which students are required to make inference, recognize new versions of information previously encountered, and solve problems
4. opinion tasks, in which students are expected to state a preference for something.

Task, in Doyle's sense, refers to the macro-level of classroom processes, describing learning activities which are common to different subject areas. at the micro-level; however, as will be illustrated below, there may be significant differences within subjects, reflecting the cognitive processes, content, and knowledge schemata of particular subjects in the school curriculum.

Tikunoff (1985:19-21) suggests that in order to complete classroom tasks effectively, a student needs to

- a. understand the expectations of different kinds of classroom tasks, knowing what the intended product or outcome of a class task should be when it is completed, and how to complete it,
- b. participate productively in classroom tasks, maintaining active management in tasks, completing tasks accurately, and observing the teacher's norms for class tasks, and
- c. obtain feedback on tasks, knowing how to obtain feedback, whether from the teacher or someone else in the classroom who possesses appropriate information.

In addition, Tikunoff suggests that students must understand the instructional demands of classroom tasks and activities in terms of

- a. order—knowing which tasks will be completed
- b. pacing—knowing the optimal amount of time that can be spent on a task and the time when it should be completed
- c. product—knowing the kind of product (e.g., book report, workbook entry) expected for specific kinds of tasks
- d. learning strategies—choosing appropriate learning strategies for tasks
- e. participation—knowing if the task should be completed individually or in cooperation with others
- f. resources—knowing what resources and materials to use with different tasks.

The demands of classroom tasks pose many kinds of problems for the LEP child. In the area of participation, for example, it was noted above that students may not recognize the different task demands of silent individual work (in tests or seatwork) or academic competitiveness fostered by school experiences in their native cultures. They may also be unfamiliar with the learning strategies required in a task or the teacher's expectations for that task—its 'product', as illustrated in this interaction in a math class, cited by Dale and Cuevas (1987).

[the teacher has written this equation on the board: $(6+5) + 4$ _____ $6 + (5+4)$]

Teacher: Are they equal?

Student [English proficient]: Yes, they are.

Teacher (pointing to a LEP student): How do you know?

LEP Student: They equal.

Teacher: Yes, we know. But, tell me, why are they equal?

LEP Student: It is equal.

Teacher: OK. They are equal because both number sentences have the same sum. Now, what symbol can we write in the empty square?

Native English –Speaking student: Equal sign!

- LEP Student: (Obviously not quite sure what it is she is supposed to do, she goes to the board and writes the answer to each number sentence.)
- Teacher: Good! Tell me what symbol do we write in the *square* to say that this side (pointing) is *equal* to this side?
- LEP Student: (Appears embarrassed, lowers her head and does not answer).
(1987:9-10)

As Dale and Cuevas point out, the child's difficulties here are caused partly by a lack of linguistic resources. However, when the teacher 'steps back' from a more or less routine task at hand (in this case, solving equations) to probe higher levels of analysis, more than linguistic resources are needed. Familiarity with the learning strategies and thought processes involved in discussing math is required, as well as knowledge that these kinds of processes are an expected component of the task.

6. COGNITIVE DEMANDS OF THE MAINSTREAM CLASS

In addition to the general task demands of classroom learning, it is also necessary to consider the particular demands created when learning academically demanding school content, such as math, science, or social studies, through the medium of a second language. These can be called the 'cognitive' demands of the curriculum.

There are three major dimensions to the cognitive demands of content related instruction:

- a) the ability to assimilate new concepts and information associated with specific subject areas in the curriculum,
- b) the ability to use and understand the linguistic resources employed with particular content domains, and
- c) the ability to use and understand particular modes of inquiry associated with specific content domains.

The need to understand new concepts is crucial in a subject such as social studies in which concepts such as 'conflict', 'liberty', 'equal opportunity', 'minority rights', and 'prejudice' might be crucial to a lesson on the rights of blacks. As King et al. (1987) point out, child entering a 5th grade social studies class is assumed to be familiar with background concepts and schemata acquired at earlier grades. Without a full understanding of many of these concepts, the child will not be able to understand the contents of the 5th grade social studies curriculum.

Social studies also presents a particular set of linguistic challenges to the LEP student. Chamot and O'Malley (1986) cite the State of Maryland's requirement that 94 vocabulary items be learned in preparation for a citizenship competency exam. They also illustrate the difficult mix of vocabulary and concepts peculiar to social studies in the following example, taken from a study guide for high school social studies:

Federalism means division of government powers between the national and state governments. Both levels of government may act directly on citizens through their own official and laws. Both levels of government derive their power to act from our Constitution. Each level of government has certain subjects over which its powers are supreme. Both levels of government must agree to changes in the Constitution.
(1986:68)

Chamot and O'Malley also point out that social studies texts tend to have particular patterns of discourse, in which a passage listing a series of facts and dates is followed by one where this information is explained. At the level of sentence structure, students must also be able to decode

cause-and-effect structures, and where historical events or trends are discussed, negotiate a complex mix of verb tenses (1986: 68-69). In addition, a greater degree of inferencing and evaluation may be called for in social studies than in other areas of the curriculum.

In math, different kinds of problems exist. New concepts include such things as prime numbers, which requires knowing what odd and even numbers are and how to divide by prime factors. The vocabulary contains many words unique to math (e.g., *divisor* or *coefficient*), has equivalent forms of different concepts which must be recognized (e.g., ‘subtract from’, ‘decrease by’, ‘less’, ‘minus’, and ‘take away’ all represent subtraction), and words which have different meanings in math texts from their usage elsewhere (e.g., *eight divided by two* is written as $2/8$, not $8/2$ (Dale and Cuevas 1987: 15). Additionally, at the discourse level, math problems often possess a certain ambiguity stemming from the relative lack of redundancy employed in the discourse of math, as compared to ordinary prose:

Food expenses take 26% of the average family’s income
A family makes \$700 a month. How much is spent on food?
(Dale and Cuevas 1987: 23).

In addition, the learner must deal with a mode of inquiry which centers on using problem-solving and computational skills and selecting appropriate problem-solving strategies for different kinds of problems.

In the sciences, knowledge of particular schemata is needed to participate in different kinds of scientific discourse. Dansereau provides an example of a schemata that is needed to study scientific theories:

1. Description: A short summary of the theory includes
 - a. Phenomena
 - b. Predictions
 - c. Observations
 - d. Definition
2. Inventory/ History: A brief account of the theory’s history, which includes
 - a. Name(s)
 - b. Date
 - c. Historical background
3. Consequences: A concise summary of how the theory has influenced man.
 - a. Applications
 - b. Beliefs
4. Evidence: A short summary of facts that support or refute the theory. This includes
 - a. Experiments
 - b. Observations
5. Other Theories: A concise summary of theories dealing with the same phenomena. There are usually of two types:
 - a. Competing theories
 - b. Similar theories
 (Dansereau 1985:232-233)

In the area of language, the vocabulary of science poses considerable demands on the LEP student. Hurd et al. (1981) report that intermediate science texts introduce an average of 2,500 new terms in each year of instruction. At the level of syntax, scientific discourses uses different

syntactic devices to signal that different processes are involved or that different types of information are being presented. For example, hypotheses are likely to contain a number of if-then sentences and make use of the conditional (Mohan 1983). At the discourse level, learners must be able to distinguish between attitude to truth reflected in different segments of scientific texts—for example, in descriptions of effects versus hypotheses or inferences. The learner must also be able to recognize and interpret experiments and information making productive use of these different schemata.

7. IMPLICATIONS FOR PROGRAM DESIGN

The preceding discussion has suggested that effective participation in the mainstream classroom has three interrelated dimensions, referred to here as the interactional dimension, the instructional task dimension and the cognitive dimension. An effective ESL program for students of limited English proficiency must address each of these dimensions of student functional proficiency if it is to give minority students an adequate preparation for the demands of the mainstream classroom. This is the issue of curriculum alignment, that is, ensuring that the ESL curriculum reflects the content and processes of the regular school curriculum. At the same time, such a program can only partially prepare students for regular classroom instruction. The mainstream teacher also shares the responsibility for ensuring that he or she teaches to all the students in the class and not just majority students. What instructional options are available to address these problems?

With regard to the interactional dimension, one option is for the teacher to modify the interactional structure of the classroom in order to assist the minority child in acquiring appropriate classroom interactional skills.

A strategy which is available to teachers who speak the students' home language is to use the children's home language to mediate effective instruction. In a study of successful bilingual education teachers, teachers were observed to make frequent use of their LEP students' home language and culture in order to promote classroom participation and interaction.

Teacher's use of cultural information took linguistic as well as non-verbal forms in three ways: (1) responding to or using L1 cultural referents to enhance instruction, (2) organizing instructional activities to build upon ways in which LEP students naturally participate in discourse in their own home cultures, and (3) recognizing and honoring the values and norms of LEP students' home cultures while teaching those of the majority culture. (Tikunoff 1985:92)

Cazden et al. (1980) cite further examples of teachers' successfully bridging the cultural gap between the culture of the home and the school culture. A Hispanic first grade teacher created some home-school continuity by reinforcing values taught at home, demonstrating familiarity with the family and community lives of her students, and employing first-language communicative strategies (in this case, the use of diminutives) to create a comfortable atmosphere in the classroom. Similarly, a Filipina teacher observed by Ongtoco (1987) used both linguistic and cultural strategies to put her students at ease. At the same time, her patterns of questions, nominations and other components of classroom discourse management shifted over a semester from a highly teacher-oriented pattern of controlled nominations focused on discrete answers (a 'product' focus), to one more closely resembling the open bidding pattern observed in a mainstream classroom in the same school (i.e., 'process' focus). In this way, while making the course content and interactional patterns manageable for her students at the beginning of the term, she acquainted them gradually with the interactive and cognitive tasks needed for entry into the mainstream classroom.

With regard to the instructional task dimension, observation of effective content teachers suggests that they monitor their own teaching and their students' performance to ensure that students understand the demands of different kinds of classroom tasks and participate appropriately and effectively in classroom tasks. Tikunoff (1985) presents the following figure (Figure 1) showing the relationship between teacher behavior and student performance on tasks.

SO THAT STUDENTS CAN:

Decode, understand:

- Task expectations (what produce should look like; how to complete accurately)
- New information

Participate productively:

- Maintain productive engagement on assigned tasks and complete them
- Complete tasks with high accuracy
- Know when tasks are successful
- Observe norms (meet teacher's expectations)

Obtain feedback:

- Know how to obtain accurate feedback re task completion, i.e.,
 - a. whether achieving success or
 - b. how to achieve success

TEACHERS MUST:

Communicate clearly:

- Give accurate directions
- Specify tasks and measurements
- Present new information by explaining, outlining, summarizing, reviewing

Obtain, maintain, agreement:

- Maintain task focus
- Pace instruction appropriately
- Promote involvement
- Communicate expectations for successful performance

Monitor progress ...

- Review work frequently
- Adjust instruction to maximize accuracy

... and provide immediate feedback:

- Re task completion so students
 - a. know when they are successful or
 - b. are given information about how to achieve success

Figure 1: Relationship between student participation on tasks and teacher performance (from Tikunoff 1985:135)

Chamot and O'Malley (1986) discuss an approach to program design which attempts to address the interactional, instructional task and cognitive dimensions of mainstream content instruction, by focusing on three kinds of learner strategies:

Metacognition strategies, which involve executive processes for learning, monitoring one's comprehension and production, and evaluating how well one has achieved a learning objective; Cognitive strategies, in which the learner interacts with the material to be learned by manipulating it mentally (as in making the mental images or transferring previously acquired concepts or skills) or physically (as in grouping items to be learned in meaningful categories or taking notes on important information to be remembered); Social-affective strategies, in which the learner either interacts with another person in order to assist learning, as in cooperation or asking questions for clarification, or uses some kind of affective control to assist a learning task. (Chamot and O'Malley 1986:17)

In addition, the language development component of the program focuses on

Development of the specialized vocabulary and technical terms of each content area; Practice with the language functions used in academic communication, such as explaining, informing, describing, classifying, and evaluating; Development of the ability to comprehend and use the language structures and discourse features found in different subject areas; and Practice in using the language skills needed in the content classroom, such as listening to explanations, reading for information, participating in academic discussions, and writing reports. (Chamot and O'Malley 1986:15)

Chamot and O'Malley illustrate how these principles can be applied to the development of lessons in science, math, and social studies, which provide a transitional level prior to entering the mainstream academic curriculum.

A program with similar goals is described by King et al. (1987). They describe a content-based program which seeks to develop students' knowledge of vocabulary and concepts as well as develop the study skills and critical thinking skills needed for success in mainstream content classes. Practical suggestions for ways of achieving curriculum alignment through the integration of language development with content instruction are also given in Mohan (1976), Cantoni-Harvey (1987), and Crandall (1987), although these texts discuss primarily the third dimension of student functional proficiency—the cognitive dimension—and have little to say about the interactional or instructional task dimension. Another issue less frequently discussed in the literature on content-based ESL instruction is the influence of external factors. In the United States, for example, local programs for LEP students must meet federal guidelines with gauge the success of an ESL program by the rapidity with which students are mainstreamed, based on performance on a standardized language proficiency test. Such a requirement will obviously have a major influence on the design of an ESL program.

8. CONCLUSION

Program planners, textbook writers, and ESL teachers now have a variety of options to choose from in developing content-based approaches to ESL instruction. The present analysis has suggested that the basis for appropriate instructional designs is the notion of student functional proficiency and its interactional, task, and cognitive components. At the same time, a broader research base is essential to provide data for program planning and evaluation. This would provide three kinds of data:

- a. Information on how successful ESL programs for LEP students integrate English language development with content-focused instruction. Case studies and observational accounts of successful programs could provide this kind of information.
- b. Information on what it is that effective LEP students do to cope with the demands of mainstream classes. Observational data and research on learner strategies could provide information in this category.
- c. Information on what it is that effective mainstream teachers do to accommodate their instructional style to LEP students.

REFERENCES

- Barnes, D., Britton, J., & Rosen, H. (1969). *Language, the learner and school*. Baltimore, MD: Penguin.

- Brown, G., Anderson, A., Shillcock, R., & Yule, G. (1984). *Teaching talk: Strategies for production and assessment*. Cambridge: Cambridge University Press.
- Cantoni-Harvey, G. (1987). *Content-area language instruction: Approaches and strategies*. Reading, MA: Addison-Wesley.
- Carrasco, R. L. (1981). Expanded awareness of student performance: A case study in applied ethnolinguistic monitoring in a bilingual classroom. In H. Trueba, G. P. Guthrie & K. H. Au (Eds.), *Culture and bilingual classroom: Studies in classroom ethnography*. Rowley, MA: Newbury House.
- Cazden, C. (1987). Classroom discourse. In M. C. Wittrock (Ed.), *Handbook of research on teaching*. New York: Macmillan.
- Carrasco, R., Maldonado-Guzman, A. A., Erickson, F. (1980). The contribution of ethnographic research to bilingual education. In J. E. Alatis (Ed.), *Current issues in bilingual education* (pp. 64-80). Washington, D.C.: Georgetown University Press.
- Camot, A.U., & O'Malley, J. M. (1986). *A cognitive academic language learning approach: An ESL content-based curriculum*. Rosslyn, VA: National Clearinghouse for Bilingual Education.
- Chaudron, C. (1988). *Second language classrooms: Research on teaching and learning*. New York: Cambridge University Press.
- Cheng, L. (n.d). *Cultural perspectives: Contrastive cultural analysis* (Unpublished report). San Diego State University Department of Communication Disorders.
- Crandall, J. (Ed.). (1981). The role of primary language development in promoting education success for language minority children. In *Schooling and language minority students: A theoretical framework* (pp. 3-49). Los Angeles: California State University.
- Dale, T. C., & Cuevas, G. J. (1987). Integrating language and mathematics learning. In J. Crandall (Ed.), *ESL through content-areas instruction: Mathematics, science, social studies* (pp. 9-54). Englewood Cliffs, NJ: Prentice-Hall.
- Danserau, D. F. (1985). Learning strategy research. In J. W. Segal, S. F. Chapman & R. Glasses (Eds.), *Thinking and learning skills* (pp. 209-49). Hillside, NJ: Lawrence Erlbaum Associates.
- Doyle, W. (1979). Classroom tasks and students' abilities. In P. L. Peterson & H. J. Walberg (Eds.), *Research on teaching: Concepts, findings, and implications* (pp. 183-209). Berkeley, CA: McCutchan.
- Academic work. (1983). *Review of Educational Research*, 53(2), 159-199.
- Forman, S. (1972). *Cultural differences in response to filmed child sequences* (Unpublished master's thesis). University of Hawai'i, Manoa.
- Gallimore, R., Boggs, J., & Jordan, J. (1974). *Culture, behavior and education*. Beverly Hills, CA: Sage.
- Hurd, P. D., Robinson, J. T., McConnel, M. C., & Ross, N. M. (1981). *The status of middle and high school science*. Louisville, CO: Center for Educational Research and Evaluation, BSCS.
- King, M., Fagan, B., Bratt, T., & Baer, R. (1987). ESL and social studies instruction. In J. Crandall (Ed.), *ESL through content-area instruction: Mathematics, science, social studies*. Englewood Cliffs, NJ: Prentice-Hall.
- Mohan, B. A. (1986). *Language and content*. Reading, MA: Addison-Wesley.
- Moore, D.W., Moore, S. A., Cunningham, P. M., & Cunningham, J. W. (1986). *Developing readers and writers and the content areas: K-12*. New York and London: Longman.
- Ongteco, B. C. (1987). *Teacher-student interaction patterns in bilingual and mainstream classrooms* (Unpublished doctoral dissertation). University of Hawai'i, Manoa.

- Philips, S. V. (1972). Participant structures and communicative competence: Warm Springs Indian children in community and classrooms. In C. Cazden, V. John & D. Hymes (Eds.), *Functions of language in the classroom*. New York: Teachers College Press.
- Saville-Troike, M. (1984). What really matters in second language learning for academic achievement? *TESOL Quarterly*, 18(2), 199-220.
- Schinke-Llano, L. (1983). Foreigner talk in content classrooms. In H.W. Seliger & M. H. Long (Eds.), *Classroom oriented research in second language acquisition* (pp. 146-65). Rowley, mass: Newbury House.
- Teruya, A., & Wong, J. (1972). *The Filipino immigrant child: A handbook for teachers*. Honolulu, HI: University of Hawai'i.
- Tikunoff, W. J. (1985). *Developing student functional proficiency for LEP students*. San Francisco: Center for Interactive Research Development.
- University of the State of New York. (1983). *The New York State core curriculum for English as a second language in the secondary schools*. Albany, New York: Bureau of Bilingual Education.
- Wong-Fillmore, L. (1982). Language minority students and school participation: What kind of schooling is needed. *Journal of Education*, 164, 143-56.

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